

1           IN THE UNITED STATES COURT OF FEDERAL CLAIMS

2

3   IN RE: DOWNSTREAM ADDICKS AND       ) Case No.

4   BARKER (TEXAS) FLOOD-CONTROL       ) 17-9002L

5   RESERVOIRS.                               )

6   \_\_\_\_\_)

7

8

9                               Courtroom 8B

10                   BOB CASEY UNITED STATES COURTHOUSE

11                               515 Rusk Street

12                               Houston, Texas 77002

13                               Friday, October 25, 2024

14                               10:00 a.m.

15

16

17                               Trial Volume 1

18

19

20                               BEFORE:   THE HONORABLE LOREN A. SMITH

21

22

23

24   GARY SCHNEIDER, RMR, CRR, Court Reporter

25

1 APPEARANCES:

2 ON BEHALF OF THE PLAINTIFFS:

3 RAND P. NOLEN, ESQ.

4 Fleming, Nolen & Jez, L.L.P.

5 2800 Post Oak Boulevard

6 Suite 6000

7 Houston, TX 77056

8 (713) 621-7944

9 rand\_nolen@fleming-law.com

10 and

11 RICHARD WARREN MITHOFF, JR., ESQ.

12 Mithoff Law Firm

13 500 Dallas Street, 3450

14 Houston, TX 77002

15 (713) 654-1122

16 rmithoff@mithofflaw.com

17 and

18 JACK EDWARD MCGEHEE, ESQ.

19 H.C. CHANG, ESQ.

20 McGehee, Chang, Landgraf, Feiler

21 10370 Richmond Avenue

22 Suite 1300

23 Houston, TX 77042

24 (713) 864-4000

25 jmcgehee@lawtx.com

1           hcchang@lawtx.com  
2           and  
3           RUSSELL S. POST, ESQ.  
4           Beck Redden, LLP  
5           1221 McKinney Street, Suite 4500  
6           Houston, TX 77010  
7           (713) 951-6292  
8           rpost@beckredden.com

9

10    ON BEHALF OF THE DEFENDANT:

11           KRISTINE SEARS TARDIFF, ESQ.  
12           LAURA DUNCAN, ESQ.  
13           FRANCES MORRIS, ESQ.  
14           AMBER DUTTON-BYNUM, ESQ.  
15           U.S. Department of Justice  
16           Environmental and Natural Resources Division  
17           53 Pleasant Street, 4th Floor  
18           Concord, New Hampshire 03301  
19           (603) 230-2583  
20           kristine.tardiff@usdoj.gov  
21           laura.duncan@usdoj.gov  
22           frances.morris@usdoj.gov  
23           amber.dutton-bynum@usdoj.gov

24

25

1 I N D E X

2 PAGE

3 WITNESS: MATTHEW BARDOL

4 Direct Examination By Mr. McGehee .....57

5 Direct Examination (Cont.) By Mr. McGehee .176

6

7 WITNESS: CORAGGIO MAGLIO

8 Direct Examination By Mr. Nolen .....133

9 Cross-Examination By Ms. Dutton-Bynum .....156

10 Redirect Examination By Mr. Nolen .....173

11

12 EXHIBITS

13 EXHIBIT FOR ID IN EVID

14 PLAINTIFF:

15 PX 004 206

16 PX 014 206

17 PX 015 198

18 PX 333 206

19 PX 354 206

20 PX 405 67

21 PX 406 87

22 PX 407 198

23

24

25

1 (EXHIBITS ADMITTED INTO EVIDENCE Continued)

2	EXHIBIT	FOR ID	IN EVID
3	JOINT:		
4	JX 002		206
5	JX 003		206
6	JX 042		206
7	JX 053		206
8	JX 089		174
9	JX 106		172/174
10	JX 109		174
11	JX 110		174

12

13

14

15

16

17

18

19 REPORTER'S NOTES:

20 QUOTATION MARKS ARE USED FOR CLARITY AND DO NOT

21 NECESSARILY REFLECT A DIRECT QUOTE

22

23 PROPER NAMES ARE PHONETICALLY SPELLED UNLESS

24 STATED ON THE RECORD

25

1 P R O C E E D I N G S

2 - - - - -

3 (Proceeding called to order, 11:16 a.m.)

4 THE COURT: I'm in a new facility, so I  
5 haven't -- I'm getting used to it. I apologize so much  
6 for our big delay which we hadn't anticipated, but a  
7 few GPS failures. Being lost, I think we parked  
8 somewhere near Dallas, so it took a little while  
9 getting from the garage. So, again, I apologize, but  
10 that's the first day, I guess.

11 Let me welcome you and also thank the  
12 Houston -- United States District Court for Houston  
13 District. They've been very, very helpful to us.

14 So let me find out who's here. And I'll ask  
15 the plaintiff first to identify themselves for the  
16 record.

17 MR. NOLEN: Yes, Your Honor. Rand Nolen,  
18 Jack McGehee, Richard Mithoff, Larry Dunbar, and we  
19 also have Russell Post for the plaintiff.

20 THE COURT: Great. Good to be here with you.  
21 And likewise with the Department of Justice.

22 MS. DUNCAN: Yes, Your Honor. Good morning.  
23 Laura Duncan for the United States. With me today I  
24 have Ms. Frances Morris, Ms. Amber Dutton-Bynum,  
25 Ms. Kris Tardiff --

1 MS. TARDIFF: Good morning.

2 MS. DUNCAN: -- and our --

3 THE COURT: Yes, Ms. Tardiff. Good to see  
4 you again. She was here the first one of these that I  
5 did.

6 MS. DUNCAN: Yes. And our agency counsel,  
7 Ms. Erin Zetterstrom.

8 MS. ZETTERSTROM: Good morning, Your Honor.

9 THE COURT: Good to see you all and good to  
10 have you here as well.

11 All right. The first thing we're going to  
12 do, there's some motions in limine that were filed  
13 before the trial over the -- I think it was a couple  
14 days ago, so I want to deal with those. Then we can  
15 get on to plaintiffs' opening statement.

16 And let me also ask counsel at this point  
17 what's a realistic anticipation of next week.

18 Yes?

19 MR. NOLEN: Your Honor, we suspect and  
20 believe that the schedule the court has already entered  
21 is realistic, and we actually believe we can finish our  
22 case and give a little bit of time back. In fact, one  
23 of the things that I had mentioned to the lawyers for  
24 the government was, is did the court want to have time  
25 limits to try to get in in this four days the witnesses

1 that we have said we would bring. And I had suggested  
2 that maybe the court would impose some time limits. We  
3 had come out with about ten-and-a-half hours per side,  
4 and so we would, you know, respectfully suggest that.

5 It was pointed out to me by opposing counsel  
6 that this had been brought up before and that the court  
7 had rejected time limits, so I don't want to say that  
8 we've never considered this before, but I thought I  
9 would raise it again since we're all here.

10 THE COURT: Okay. Thank you, Mr. Nolen.

11 I tend to think time limits are not useful  
12 with good counsel, and this case has a lot of good  
13 counsel. Can usually -- you're not going to waste  
14 time. If they think something needs to be put on the  
15 stand for the judge to hear the facts, that's  
16 important. I mean, I think we've gotten to a stage  
17 where courts of appeals now are talking in five-minute  
18 segments often for smaller cases and rarely more than  
19 half an hour, and even that's rare.

20 So I think it's important for people to be  
21 able to have time to put on their case. And the trial  
22 is the most appropriate because it's fact based, and  
23 facts are not known until they become part of the  
24 record. And so limiting that is just I think not doing  
25 the job that we need to do to figure out what the truth



1 is.

2 And also, as I said, I have a great respect  
3 for the counsel particularly in this case who I think  
4 are not going to waste their time. And so as long as  
5 it isn't wasting their time, my time is designed to  
6 come to the right answer, and so I'm perfectly happy  
7 with the fact that you're looking at maybe  
8 ten-and-a-half hours each side.

9 If we finish early, the last day was going to  
10 be the site view. Is that flexible enough that we  
11 could move that back, for example, if we finished  
12 Wednesday? Can we have it Thursday rather than Friday?

13 MR. NOLEN: I believe it's scheduled for  
14 Thursday, Your Honor.

15 THE COURT: Oh, it's scheduled. Okay.

16 MR. NOLEN: Yes, sir.

17 THE COURT: So if we finished earlier than  
18 that for some reason, maybe we could move it possibly  
19 to Wednesday?

20 MR. NOLEN: I don't know. You'll have to ask  
21 the government because it's their facilities.

22 THE COURT: Okay. Good.

23 Yes, Ms. Duncan?

24 MS. DUNCAN: Your Honor, may I speak to those  
25 issues briefly?

1 THE COURT: Sure, sure.

2 MS. DUNCAN: We agree with the court that at  
3 this point it is not helpful to set time limits. We  
4 will certainly try to be efficient and do our best to  
5 wrap up our case in the four days. But at this point,  
6 we've prepared our case as if there are not strict time  
7 limits, and so we prefer to proceed as Your Honor has  
8 outlined.

9 I will note that the last witness on our list  
10 is Dr. Nairn, one of our expert witnesses. We're  
11 unable to present him on the 31st, which is why we put  
12 the site visit on that day.

13 THE COURT: Yeah, okay.

14 MS. DUNCAN: So if we are not finished by  
15 that Tuesday, we'll need to proceed, as I believe we  
16 may have discussed in prior status conferences, which  
17 is to find another set of days where we can get  
18 together perhaps in D.C. or if we can make other  
19 arrangements to be in Houston.

20 And on the site visit, Your Honor, if we get  
21 to a point where we think we may want to look into  
22 moving the site visit to Wednesday, we can look into  
23 that. I know that the corps has made various  
24 arrangements for us, like reserving a van, and it may  
25 be difficult to change those arrangements around.

1 THE COURT: Okay. I understand that. So I  
2 was just putting that as a suggestion.

3 MS. DUNCAN: Yes, Your Honor.

4 In addition to the pending motions, and I'm  
5 tracking three pending motions, Your Honor --

6 THE COURT: Yes.

7 MS. DUNCAN: -- we do have a few other  
8 housekeeping matters. Would you like to raise those  
9 now?

10 THE COURT: Yeah, why don't we raise the  
11 housekeeping matters now.

12 MS. DUNCAN: Okay. Your Honor, you and your  
13 clerk should have paper copies of all of the exhibits  
14 in binders near your seats. We also have an electronic  
15 jump drive of exhibits for you. Maybe the next break  
16 we can bring that over.

17 THE COURT: Okay.

18 MS. DUNCAN: What we've found in prior trials  
19 like this one is that there are so many large binders  
20 that it is difficult for the witness to step down to  
21 get a binder and an exhibit. And what we've found  
22 works well is to have a paralegal sit near the witness  
23 stand and aid bringing the binder up and flipping to  
24 the exhibit for the witnesses. I believe that  
25 plaintiffs are fine with this approach. And we found

1 it saves a lot of time. So we would propose to have a  
2 paralegal sit over here during the exam of witnesses.

3 THE COURT: Okay. And the court has no  
4 problem with that.

5 MS. DUNCAN: Thank you.

6 We do have one witness who we believe is  
7 slated for today, Mr. Coraggio Maglio. He is a former  
8 employee of the Corps of Engineers. And he is  
9 unavailable to testify next week.

10 THE COURT: Okay.

11 MS. DUNCAN: So we would like to -- even if  
12 we're not to his spot in the witness call, we would  
13 like to ask Your Honor to take a short break in the  
14 testimony of whoever is on the stand later this  
15 afternoon, perhaps 4:00 or whatever suits Your Honor,  
16 to put Mr. Maglio on the stand and get his testimony in  
17 before he has to leave town tomorrow.

18 THE COURT: What's your expected time for his  
19 testimony?

20 MS. DUNCAN: The United States has  
21 anticipated approximately a half hour for its  
22 testimony, and I don't know what plaintiffs have in  
23 mind.

24 MR. NOLEN: Your Honor, we thought Mr. Maglio  
25 would be about an hour. He's a fairly short witness.

1 THE COURT: Okay. Why don't we then break  
2 when he's available. Thank you.

3 MS. DUNCAN: And, Your Honor, with that, I  
4 think the only thing left would be the three pending  
5 motions. I'd like to invite -- do you have an order  
6 that you'd like to proceed in hearing those?

7 THE COURT: No.

8 MS. DUNCAN: Okay. Why don't we start with  
9 the video clips --

10 THE COURT: Okay.

11 MS. DUNCAN: -- motions. And for that, I'm  
12 going to ask Ms. Tardiff to argue.

13 THE COURT: Okay.

14 Ms. Tardiff.

15 MS. TARDIFF: Very good. Thank you, Your  
16 Honor.

17 So we've got two motions in limine before the  
18 court this morning directed at plaintiffs' request to  
19 play selected video deposition testimony, first in  
20 their opening statement and then again as part of the  
21 direct examination of their expert witness. So let me  
22 turn first to the opening statements since that's where  
23 we will begin today.

24 The court did, of course, hear from the  
25 parties on this issue at the pretrial hearing last

1 week, but that was before the plaintiffs had disclosed  
2 what the video clips were that they intended to play.  
3 So those have been disclosed to us on Tuesday. Your  
4 Honor, we've had a chance to review those, and that is  
5 the reason why we filed the separate motion in limine.

6 So at the pretrial conference, the court  
7 raised three evidentiary considerations regarding the  
8 playing of unadmitted video deposition testimony during  
9 the opening, so that was that the testimony needed to  
10 be otherwise admissible, the testimony needed to be  
11 relevant, or at least would be relevant at some point.  
12 And then the court also flagged that the testimony is  
13 not inflammatory or have other negative qualities.

14 So let me start with admissibility, Your  
15 Honor. To begin with, the court is conducting a trial  
16 on the limited issues identified in the court's  
17 pretrial order, and that's because it determined that  
18 these issues could not be resolved on the paper record  
19 that the parties presented on cross-motions for summary  
20 judgment which, of course, included excerpts of  
21 deposition transcripts. So we are here to present  
22 evidence to the court through live testimony.

23 Second, the admissibility of testimony should  
24 be determined when each of these three witnesses whose  
25 excerpts are at issue in the opening take the stand.

1 They are all going to take -- they are all here. They  
2 are all available. They are all on the parties' --  
3 both parties' witness list, and so we expect them to  
4 take the stand, provide their testimony under oath  
5 today or perhaps Monday.

6 The court should not assume that the excerpts  
7 selected by plaintiffs are admissible as plaintiffs  
8 intend to present them. In fact, we did lodge  
9 objections to many of the questions that were posed at  
10 the depositions and that plaintiffs seek to play video  
11 clips of. And plaintiffs should not be allowed to skip  
12 over the process of resolving those evidentiary  
13 objections by playing the clips in their opening  
14 statement.

15 And, of course, there's no prejudice to  
16 plaintiffs in not being able to play the video clips in  
17 their opening. We have a courtroom full of trial  
18 attorneys here. Everybody knows how to ask good  
19 questions when live witnesses are on the stand and deal  
20 with objections as they come up. So if the testimony  
21 is indeed admissible, it will come in through the  
22 normal process before the court here over the next  
23 week.

24 And third, Your Honor, in the context of a  
25 trial, of course, deposition testimony is only

1 admissible under specific and limited circumstances  
2 under the rules, and that includes Rule 32 which  
3 plaintiffs have not addressed, but the playing of  
4 unadmitted video testimony in an opening is not one of  
5 those permissible uses of deposition testimony, Your  
6 Honor. And that kind of brings us back to the  
7 underlying problem with plaintiffs' proposal here for  
8 their opening, and this also applies to the use of  
9 deposition video clips with the expert, and that's that  
10 plaintiffs have cherrypicked selected excerpts of the  
11 deponents' testimony to show in their video clips. And  
12 in so doing, Your Honor, they are mischaracterizing the  
13 witnesses' testimony by taking it out of context.

14 Now, this court's rules and the Federal Rules  
15 of Evidence of course have provisions to protect  
16 against this tactic which is prejudicial. Certainly  
17 when a party seeks to admit limited deposition  
18 testimony under Rule 32, Rule 32(a)(6) expressly states  
19 that the other side, the other party may require the  
20 offer to introduce other parts. That is the rule.  
21 Plaintiffs are looking for a way to avoid the rule by  
22 playing these excerpts and only those excerpts, and  
23 that is prejudicial to the United States.

24 So that is the issue for the most part on the  
25 openings. And I can pause there if you want to take



1 these one by one or I can address the second motion.

2 THE COURT: Yeah, let me just respond on  
3 that. I've always seen the opening statement as the  
4 painting a picture of the views of the plaintiffs'  
5 case. And in that sense, it's not evidence and it goes  
6 to the judge's understanding of the case. If this was  
7 a jury trial and we had a jury who might be influenced  
8 by this, that would be a different story entirely.

9 But it seems to me in a bench trial, whatever  
10 the plaintiff wants to put on in the opening seems to  
11 me permissible because it's their portrait of the case  
12 and it's their vision. Obviously it isn't only vision.  
13 Obviously the government has its own vision of the  
14 case. And the court has to piece together what the  
15 ultimate truth is.

16 And the court is capable of listening to  
17 almost any opening that's devoid of, say, obscene  
18 material or material that's totally irrational and has  
19 no basis in any fact that would be purely emotional.  
20 That is not involved here.

21 So I'll deny the motion in limine and let the  
22 plaintiffs put on -- obviously the government can  
23 respond to this a number of ways by putting on its own  
24 alternative or in the oral arguments or post-trial  
25 briefs, you know, point out that the prejudice nature

1     that it's unrealistic or taken out of context. But  
2     everything in a trial is taken out of context. The  
3     contract is what, you know, really happened. In --  
4     during the tropical storm that poured so much water and  
5     damage on Houston, there are thousands of things that  
6     happened in that, terrible things to many of the people  
7     in the courtroom. But trials are about distilling  
8     context to obviously what can fit in the courtroom and  
9     can fit in the record.

10                 So I think I'll deny that for those reasons.

11                 MS. TARDIFF: Very good, Your Honor. And we  
12     certainly understand that opening statements are not  
13     evidence. And the court made that clear in the  
14     pretrial order, so we understand that applies here.

15                 So let me turn, then, to our second motion in  
16     limine which speaks to plaintiffs' second request in  
17     terms of using the same video clips and some additional  
18     ones through the introduction of testimony through  
19     their expert witness who is intended to be their first  
20     witness at trial because here we are now at a stage  
21     where the court is hearing evidence. And so some of  
22     these same issues are at play, but now we're talking  
23     about whether the video clips are actually admissible  
24     into evidence --

25                 THE COURT: Yes.

1 MS. TARDIFF: -- through the expert witness,  
2 so it is a different question at this point.

3 Plaintiffs have filed a response to our  
4 motion, so let me tackle this by going through some of  
5 that. Plaintiffs first say that the court should  
6 sustain its prior ruling and the ruling now given here  
7 today and overrule the government's motion. Of course  
8 there is no ruling on the issue of whether the video,  
9 unadmitted video deposition clips can be used with  
10 their expert witness, so this is the first time this  
11 issue is before the court.

12 THE COURT: Right.

13 MS. TARDIFF: Plaintiffs next state that  
14 despite the court previously stating it would permit  
15 the use of video clip excerpts, the United States is  
16 again -- again objects to what plaintiffs describe as  
17 the common practice of asking an expert to comment on  
18 defendant's anticipated defenses by showing short video  
19 clips of defense witness sworn deposition testimony.  
20 That's page 1 of the plaintiffs' response, Your Honor.

21 Again, no prior ruling on this issue, but  
22 I've got two additional points I'd like to make there.  
23 First, at least for me, I've been practicing before the  
24 Court of Federal Claims for over 25 years, I have to  
25 admit, and there is no common practice that I'm aware

1 of in this court or in any other federal court that  
2 I've appeared in that allows asking an expert to  
3 comment on a defendant's anticipated defenses by  
4 showing short video clips of unadmitted deposition  
5 testimony. So that is unusual.

6 Now, experts can and often do sit in the  
7 courtroom, listen to the testimony that actually comes  
8 into the record and is admitted as evidence and then  
9 respond to that as part of plaintiffs' rebuttal case if  
10 they put one on. But it is not appropriate to do a  
11 pre-rebuttal case with the very first witness that  
12 they're calling in the case. So the evidence needs to  
13 come in, and it should come in under the federal rules.  
14 And then at that point if they want their expert to  
15 provide rebuttal testimony, they may do so.

16 Now plaintiffs acknowledge that this is in  
17 part what they're trying to do and suggest that  
18 allowing these video clips in the record as evidence  
19 through their expert would be judicially expedient  
20 since it could eliminate the need to recall the expert  
21 in rebuttal. But, again, if there's a rebuttal case  
22 here, it needs to come at the end after the United  
23 States has rested and not through the very first  
24 witness the plaintiffs call.

25 THE COURT: I mean, that seems to me

1 something that in principle I would allow, but it's  
2 much better challenged at the time and in the specific  
3 circumstances, so I'll deny the motion for now but  
4 leave to raise it later on.

5 MS. TARDIFF: And we'll certainly be prepared  
6 to raise it as those issues come up.

7 THE COURT: Okay.

8 MS. TARDIFF: Thank you, Your Honor.

9 MS. DUNCAN: Your Honor?

10 THE COURT: Yes.

11 MS. DUNCAN: The third pending motion is the  
12 motion for judicial notice. Would you like to hear  
13 argument on that at this point?

14 THE COURT: I assume the judicial notice  
15 deals with the declaration of a disaster by the  
16 president and by the governor?

17 MS. DUNCAN: Yes, Your Honor.

18 THE COURT: What is -- has the plaintiff  
19 objected to this?

20 MR. NOLEN: We did, Your Honor, on the  
21 grounds of relevancy. Would you like to hear my  
22 argument on this?

23 THE COURT: Sure.

24 MR. NOLEN: Okay. So the reason is because  
25 we're conflating two things here. And there is no

1     doubt and we do not dispute, nobody has disputed, that  
2     the Harvey event was just a humongous rain event. I  
3     mean, you couldn't have been in Houston, Texas and not  
4     known that. And so we fully acknowledge that there was  
5     a very large rain event. 11 percent of the homes in  
6     Houston, Texas were flooded as a result of this rain  
7     event. That 11 percent includes the folks who were  
8     flooded as a result of the reservoir management. But  
9     the point of it is, is that we're conflating two  
10    things.

11               When we talk about a declaration of disaster,  
12    that's different from an emergency declaration. And  
13    the court had indicated that it was interested in two  
14    questions, and none of those questions went to a  
15    declaration of disaster.

16               We fully acknowledge that there was a  
17    declaration of disaster issued by the governor of Texas  
18    before Harvey ever made landfall, and there was a  
19    declaration of disaster issued by the president that  
20    was issued essentially the same day that Harvey made  
21    landfall but before Houston had been fully inundated.

22               And, of course, as the court is undoubtedly  
23    aware, those declarations are made for purposes of  
24    funding and putting the resources and personnel in the  
25    right places in order to deal with what it is that --

1     whatever the disaster is that is occurring. But, you  
2     know, it's a disaster when your house burns down; it is  
3     an emergency when your house is on fire.

4             And what we understood that the court wanted  
5     to consider in this limited evidentiary hearing was the  
6     issue regarding emergency and whether or not an  
7     emergency was declared. We do not believe the court  
8     will ever hear any evidence that the Army Corps of  
9     Engineers ever declared an emergency. They never  
10    notified the city of an emergency. They never notified  
11    the county of an emergency. The city didn't declare an  
12    emergency. The county didn't declare an emergency. So  
13    we don't see how a declaration of disaster -- we  
14    acknowledge that these things happen, but we don't see  
15    that it's relevant to the considerations of the issues  
16    before the court.

17            THE COURT: Okay. Thank you.

18            I mean, it seems to me that the purpose of  
19    judicial notice is to avoid having to spend court time  
20    on things that no one disputes. What the meaning of  
21    those things is really not part of taking judicial  
22    notice, just getting rid of the rules that would  
23    otherwise require someone to verify it, hearsay and  
24    other things.

25            So I'll allow the motion with the

1 understanding that what that does is allow those two  
2 declarations not to require proof of a live witness to  
3 waste time with something that no one disputes, and  
4 that was the whole function of taking judicial notice  
5 of things.

6 So what the significance of it obviously is  
7 is to be debated at trial or to be presented at trial  
8 by different positions. So okay. I'll allow that.

9 Ms. Duncan?

10 MS. DUNCAN: We have nothing further at this  
11 time.

12 THE COURT: Okay.

13 Mr. Nolen, do you have anything before we get  
14 into your opening statement?

15 MR. NOLEN: The only thing is is that we have  
16 agreed with the government to invoke Rule 615 on  
17 exclusion of witnesses who are fact witnesses.

18 THE COURT: Okay.

19 MR. NOLEN: The government does have a  
20 corporate representative or a government representative  
21 who will be attending the entire trial. But otherwise,  
22 witnesses who are nonexperts would be excluded during  
23 each other's testimony, if that's acceptable to the  
24 court.

25 THE COURT: That's definitely acceptable.



1 Obviously the mandatory rule. I remember one witness  
2 saying "Can I be excluded too?" They were the  
3 representative of the party. No, can't do that.

4 All right. You can begin with the opening  
5 statement.

6 MR. NOLEN: All right. Thank you very much.  
7 May it please the court, Your Honor, opposing counsel,  
8 the government, nice to see you in our fair city, and  
9 the homeowners who are present today for these  
10 proceedings. And we thank the court for also coming to  
11 our fair city. And actually waiting until October was  
12 probably the best thing the court could have possibly  
13 done.

14 So I'm going to start right at the beginning.  
15 The Addicks and Barker reservoirs and why they're  
16 there, what's the purpose. And so the existing project  
17 as authorized provides for flood risk management, the  
18 protection of the City of Houston from flood damages,  
19 and the prevention of excessive velocities and silt  
20 deposits in the Houston Ship Channel Turning Basin.  
21 That mission comes directly out of the Water Control  
22 Manual. And so we took that directly out of the Water  
23 Control Manual. So that's the purpose of these  
24 reservoirs.

25 And, of course, my technology doesn't work.

1     There we go.

2                   This is the Addicks Reservoir aerial view,  
3     and you can see it's a large, very large dry reservoir  
4     that is outlined in red. A little hard to see on this  
5     screen, but it's very large. It's got basically an  
6     earthen dam, and then it's got outlet gates. And you  
7     can see the outlet gates here, right here, Your Honor.  
8     That's the outlet gates for Addicks Reservoir. And in  
9     the background, you see the downstream area. In the  
10    foreground, you're seeing the actual dry reservoir.  
11    And if we go to the next one, that's the Barker  
12    Reservoir aerial view, another very, very large  
13    structure, and another dry reservoir. People actually  
14    utilize these reservoirs as parks, and the public goes  
15    and visits them and people do the things that you would  
16    do at any sort of public park inside the reservoirs.

17                  The next picture is the outlet works for  
18    Barker. You can see in this picture that Barker at  
19    that point had water in it and was outletting water  
20    through the gates. You can see in the background there  
21    the highway and some of the structures downstream of  
22    the reservoir. And in the foreground, you're seeing  
23    water inside the reservoir. And so there's a very  
24    large berm that you can drive across on the top that  
25    goes above the outlet gates and goes all the way down,

1 all the way across the earthen berm that is there. And  
2 when the court makes its visit, you'll see these are  
3 quite massive. These are very, very large structures.

4           Going to the next slide, we see the size, the  
5 relative size of Addicks Reservoir and Barker Reservoir  
6 on the west side of Houston. And then you see the  
7 channel that comes out of those reservoirs. We call  
8 that Buffalo Bayou. And what Buffalo Bayou is, that  
9 juncture in that area is a channel to allow water to be  
10 carried from those reservoirs to the Gulf of Mexico.

11           THE COURT: Is that the white line, wavy  
12 line?

13           MR. NOLEN: So it's right here, Your Honor.  
14 These --

15           THE COURT: Okay.

16           MR. NOLEN: -- two, and it goes -- it  
17 follows.

18           THE COURT: Yeah.

19           MR. NOLEN: So that's Buffalo Bayou. And  
20 then --

21           THE COURT: I thought for a while that was a  
22 stock portfolio picture.

23           MR. NOLEN: And so these numbers here are the  
24 test property homeowners' properties.

25           THE COURT: Okay.

1           MR. NOLEN: And so we divided that up into  
2       seven zones. So you've got your closest zones up here  
3       closest to Addicks Reservoir and Barker Reservoir, and  
4       then you get farther away to the seventh zone which is  
5       way down here where you see number 13.

6           THE COURT: And that's going west from there?

7           MR. NOLEN: It's actually -- so you're going  
8       east from Addicks and Barker, Addicks and Barker on the  
9       west side of Houston.

10          THE COURT: Okay. So those are farther out  
11       from this line which is going towards the town -- or  
12       the residential areas.

13          MR. NOLEN: Yes.

14          THE COURT: Okay.

15          MR. NOLEN: Okay. So on August 25th, 2017,  
16       Hurricane Harvey made landfall along the Texas coast  
17       near Rockport, Texas as a Category 4 hurricane. Harvey  
18       weakened into a tropical storm within 12 hours of  
19       making landfall but stalled over the Houston area for  
20       four days before moving into Louisiana on August 30th,  
21       2017. Those are stipulated facts.

22                 And so the court has asked was there an  
23       emergency that necessitated the United States Army  
24       Corps of Engineers opening the Addicks and Barker  
25       Reservoir gates or were the gates opened as a matter of

1     ordinary operating procedure. We believe we know the  
2     answer to this question and have known it for a while.  
3     We know it because we did a lot of discovery in these  
4     cases. We talked to Colonel Lars Zetterstrom who was  
5     the commander of the Galveston District. He was the  
6     man who was in charge during Harvey. He was the man  
7     who was in charge of releasing the water at Addicks and  
8     Barker in the regulation called "induced surcharge."

9             We talked to Richard Long who was the  
10    spokesman for the Army Corps of Engineers. And we  
11    talked to Rob Thomas. In fact, Mr. Thomas I believe  
12    was deposed five or six different times. And although  
13    there is some amount of competing testimony, we did  
14    settle on a few things, and those things all indicate  
15    no emergency.

16            The Army Corps of Engineers never declared a  
17    Level 1, 2, or 3 emergency as defined by their  
18    Emergency Action Plan during Tropical Storm Harvey. We  
19    know that because Mr. Thomas and Mr. Long told us.

20            Apart from Stage 2 extended watch, the Army  
21    Corps of Engineers did not employ its Emergency Action  
22    Plan or its Emergency Level 1, 2, or 3 operating  
23    procedures for gate openings during Tropical Storm  
24    Harvey.

25            In 2012, the corps revised its Water Control

1 Manual to incorporate a flood control operating  
2 regulation, which I've already referenced called  
3 "induced surcharges," but did not disclose the change  
4 permitting downstream inundation to the downstream  
5 property owners. They had no knowledge.

6 And that regulation is pretty simple. When a  
7 set of conditions specified in the 2012 Water Control  
8 Manual for releases of flood water from the reservoirs  
9 under the induced surcharge provision, which is a  
10 combination of pool elevation and rate of rise behind  
11 the reservoirs, were reached, the corps initiated  
12 induced surcharge operations and started releasing  
13 water from both reservoirs shortly after midnight on  
14 August 28, 2017. Again, that's a stipulated fact.

15 The induced surcharge flood control  
16 regulation is not an emergency measure that requires an  
17 exercise of judgment in extreme conditions where  
18 imminent danger of dam failure is present. It is  
19 instead a bright-line rule that is contained in the  
20 Water Control Manual that dictates discharges when the  
21 specific conditions are satisfied.

22 The triggers for induced surcharges occur  
23 well before the reservoirs reach maximum storage  
24 capacity at their design levels and well before there  
25 is any imminent risk of dam failure by overtopping of

1 the reservoir embankments.

2 At the time the reservoirs were placed into  
3 induced surcharge operations, the reservoirs were  
4 performing exactly as expected with no significant  
5 problems. The reservoirs were not in any imminent  
6 danger of failing.

7 During Harvey, the U.S. Army Corps of  
8 Engineers operated Addicks and Barker by opening and  
9 closing their floodgates consistent with its 2012 Water  
10 Control Manual. Another stipulated fact.

11 The Army Corps of Engineers followed the 2012  
12 Water Control Manual throughout Tropical Storm Harvey,  
13 and they followed it all the way up the chain of  
14 command.

15 The reservoirs were placed into induced  
16 surcharge during Harvey to follow the induced surcharge  
17 flood control regulation, that's a mouthful, contained  
18 in the Water Control Manual. So they're following  
19 along exactly with the induced surcharge flood control  
20 regulation that was added in 2012.

21 By 2014, the Army Corps of Engineers had  
22 created maps modeling downstream inundation at various  
23 flow rates from the Addicks and Barker reservoirs.

24 When the reservoirs were placed into induced  
25 surcharge operations, the corps knew the downstream

1 properties would be inundated with the release of that  
2 water.

3 When the reservoirs were placed into induced  
4 surcharge, they knew with precision which properties  
5 would be inundated with water. They knew the street,  
6 they knew the address, and in some cases they knew  
7 exactly how much water would be in people's living  
8 rooms, kitchens, and bedrooms.

9 The decision to open the floodgates and to  
10 release 125 billion gallons of impounded water on the  
11 downstream property owners was entirely dictated by the  
12 induced surcharge regulation in the manual. As of  
13 August 30th, 2017, the corps estimated that Addicks was  
14 releasing 7,500 cubic feet per second and Barker was  
15 releasing approximately 6300 cubic feet per second for  
16 a combined discharge of 13,800 cfs downstream from the  
17 opening of the gates.

18 Okay. Roll the film, please.

19 (Video played.)

20 "You know what the Emergency Action Plan is?

21 "Yes.

22 "You know it's -- you've got to follow the  
23 Emergency Action Plan to the T, correct?

24 "You need to follow the Emergency Action  
25 Plan, yes.



1 "At no time during Hurricane Harvey was  
2 Hurricane Harvey declared an emergency by the Corps of  
3 Engineers, true?

4 "Could you restate that question, please?

5 "At no time did you designate this as an  
6 emergency?

7 "Objection. Form. Calls for speculation.

8 "At no time to my knowledge did conditions  
9 exist that would have required us to exercise the  
10 emergency operation plan.

11 "And since the conditions didn't exist, you  
12 didn't declare an emergency, did you?

13 "Objection. Form. Calls for speculation.

14 "Not to my knowledge.

15 "Okay. And there's a -- and I'm going to  
16 hand you that. That's the corps' Emergency Action  
17 Plan, isn't it?

18 "Yes, sir.

19 "And that's what you're referring to as never  
20 being invoked in Harvey?

21 "Yes, sir.

22 "Okay. Now, with respect to Addicks and  
23 Barker, they were not under emergency operations; is  
24 that correct?

25 "I'll object to the form of the question as

1     vague.

2                   "As of August 22nd, 2017, Addicks and Barker  
3     were not under any sort of Emergency Action Plan or  
4     emergency operations, right?

5                   "I -- no, they were not.

6                   "And so if Addicks Barker were ever operating  
7     under the EAP, that would have been something that  
8     Mr. Thomas would have decided or determined?

9                   "We would have determined that together, sir.

10                   "Okay. And to your knowledge, did that ever  
11     occur?

12                   "No, sir.

13                   "Has there ever been a formal declaration of  
14     a level two emergency in the history of the Addicks and  
15     Barker Dams and Reservoirs?

16                   "Not that I know of, sir.

17                   "Has there ever been a formal declaration of  
18     level one emergency?

19                   "Not that I know of, sir.

20                   "Has there ever been a formal declaration of  
21     level three emergency?

22                   "Not that I know of, sir.

23                   "In this case, there was no issue involving  
24     integrity of the dam. True?

25                   "Objection. Form. Calls for speculation.

1 "Not to my knowledge.

2 "Dam performed as expected?

3 "Objection. Form. Vague.

4 "To my knowledge, yes, sir.

5 "You were proud of how the dam performed?

6 "Yes.

7 "Was there ever a determination made that  
8 either Addicks or Barker would fail?

9 "Not to my recollection.

10 "And this point here, controlled releases  
11 from the dams are required to mitigate risk to the  
12 structure, there was no structure failure, correct?

13 "That is correct.

14 "To either Addicks or Barker?

15 "No, sir."

16 (Video stopped.)

17 MR. NOLEN: And so, Your Honor, what we  
18 believe is, is that there was no emergency. There was  
19 no emergency. No emergency was ever declared by the  
20 corps, and this is what happened. When they released  
21 the water on August 30th, 2017, this is what the  
22 downstream properties looked like. So this -- we're  
23 utilizing here Dr. Nairn, who is the corps' expert, we  
24 utilized his modeling. And what you're seeing here,  
25 all of this red is water that is flowing out of the

1 channel, the channel runs right down the middle, but  
2 it's flowing out all over those properties that I  
3 identified previously for the court. And it looks like  
4 that.

5 THE COURT: So all of that area --

6 MR. NOLEN: Let me go back, Your Honor. I'm  
7 sorry. There we are. Yes, sir.

8 THE COURT: I guess from here it looks brown,  
9 the brown area. But that is all water flooding where  
10 it shouldn't have been.

11 MR. NOLEN: Yes, Your Honor. So they're  
12 releasing it from those outlet gates up here and here,  
13 and it's flowing into this channel, and it flows  
14 outside of the banks of the channel because the channel  
15 doesn't have the capacity to hold 13,600 cubic feet per  
16 second of water. It just can't do it. And so the  
17 whole thing becomes a channel. It all becomes a  
18 channel now. All of the water is going into Buffalo  
19 Bayou into the entire watershed and flooding all of the  
20 residences that are downstream. And so it looks like  
21 that. It looks like this. It looks like this. And it  
22 looks like that.

23 And so an emergency was finally declared by  
24 the city and the county when they started having to  
25 remove and evacuate people out of their homes where

1 they were trapped after the releases, after the  
2 releases had started.

3 The surcharge releases from the reservoirs  
4 continued until September 16th, 2017, when normal  
5 operations resumed. So for 19 days, Your Honor, water  
6 was flowing out of those reservoirs at 13,000 cubic  
7 feet per second for 19 days, and so all of those folks  
8 had to be removed. Nobody could live in those houses.  
9 They were completely inundated with water.

10 And so the court also asked what would have  
11 happened if the gates had remained closed. And we  
12 know. This is what August 30th, 2017, looks like.  
13 These reservoirs are full of water. There's the  
14 Buffalo Bayou Channel, and there's not water in any  
15 houses up here. There may be a little water down here,  
16 but there's no water at all up here.

17 And so that's Dr. Nairn again. Dr. Nairn is  
18 the government's expert. And this is what he says it  
19 would look like had those gates stayed closed.

20 Now, understand, Your Honor, that they  
21 impounded the water for four days and then allowed it  
22 to build up to where you had millions and billions of  
23 gallons, 125 billion gallons, and then they open up the  
24 reservoirs. And when they do, it's like opening your  
25 hose or a fire hose, you know, downstream on all of the

1 folks who live along the channel. So somebody up here,  
2 they're okay. Somebody right there, they're all right.  
3 Somebody right here, they're probably okay. Right  
4 there, probably all right because they're right up  
5 there against the reservoir. But anybody who lived  
6 along the channel where they released the water, well,  
7 they're flooded. But they're not flooded here when  
8 those gates are staying closed.

9 And so according to Dr. Nairn, eight of the  
10 test properties would have sustained no flooding at  
11 all, eight. So that's in the first four zones. Eight  
12 of those would have never sustained any flooding at all  
13 except for the induced surcharges.

14 And I mentioned this earlier to the court.  
15 There were -- and so I've got some numbers. There are  
16 over 998,195 housing units in the City of Houston as of  
17 2020. Harvey flooded 96,410 homes in the City of  
18 Houston. So about 11 percent of the homes, the  
19 residential properties were flooded in the City of  
20 Houston as a result of Harvey.

21 We know with some high degree of certainty  
22 from Dr. Nairn and from our own expert, Mr. Bardol,  
23 that these homes that were flooded as a result of the  
24 reservoirs wouldn't have never been flooded. They just  
25 simply wouldn't have. And as to the four homes that

1     were test properties that were -- would have had some  
2     amount of flooding, we know that Houston is sort of  
3     flat, and it does flood from time to time, but Houston  
4     drains really well. We've just had to live with that  
5     and deal with that for many, many years.

6                 These homes, instead of being flooded for a  
7     day or a day or two and having a couple of inches  
8     inside the house, they instead had six and seven feet  
9     of water inside the house for 19 days. So this is what  
10    these two things look like. Gates open, gates closed.  
11    Open and closed. And so the folks who were in harm's  
12    way would have not been in harm's way had they just  
13    kept those gates closed.

14                And so how did the reservoir perform? Was  
15    there an emergency? Back to that question. And this  
16    is the after-action report, Memorandum for Commander,  
17    Southwest Division. It's from Mr. Thomas, who is here  
18    and who still works for the corps and who is the  
19    corporate representative for the corps, and he said  
20    overall conclusion is that the project was performing  
21    as expected with no significant problems during this  
22    pool of record event. Significantly, he says at the  
23    top, "The embankment outlet structures and emergency  
24    spillways functioned as intended. Piezometers,  
25    settlement pins, and alignment surveys for the outlet

1 structures do not shown any alarming trends from this  
2 pool of record. There were no observations of seepage,  
3 or critical distress areas located on the dams. Wet  
4 areas located on the downstream embankment toe were  
5 monitored, but showed no signs of flow. Erosion of the  
6 dam and cofferdam crest became an issue for inspection  
7 teams trying to transverse them." But, again, that  
8 conclusion, "Overall conclusion is that the project was  
9 performing as expected with no significant problems  
10 during this pool of record event."

11 So we know there was no emergency. There was  
12 no emergency. They followed the manual. It has  
13 automatic triggers. They followed the automatic  
14 triggers. And as a result, all of the people  
15 downstream that were along Buffalo Bayou were inundated  
16 with thousands of gallons of water that lasted for 19  
17 days, keeping them out of their homes. That's what we  
18 believe the evidence will show, that's what we intend  
19 to prove in this proceeding, and we look forward to  
20 presenting our evidence, Your Honor.

21 THE COURT: Okay. Thank you.

22 MR. NOLEN: Thank you.

23 THE COURT: Let me move on, then, to the  
24 government. Do you want to do your opening statement  
25 now or at the beginning of your case?



1 MS. DUNCAN: We'll do it now, Your Honor.

2 And Ms. Frances Morris will present for the United  
3 States.

4 THE COURT: Okay.

5 You may proceed.

6 MS. MORRIS: All right. Good morning, Your  
7 Honor. My name is Frances Morris. And together with  
8 my team, we represent the United States in this matter.

9 We are here today to determine whether the  
10 largest rainfall event in United States history which  
11 threatened to inundate the fourth largest city in the  
12 country constituted an emergency. And Your Honor asked  
13 the parties to answer several questions at this trial.  
14 First, was there an emergency that necessitated the  
15 U.S. Army Corps of Engineers opening the Addicks and  
16 Barker gates or were they opened as a matter of  
17 ordinary operating procedure, and, second, what would  
18 have happened if the gates remained closed.

19 Now, in answering these questions, the court  
20 is allowing the parties to present fact witnesses to  
21 address the actions actually undertaken by the corps  
22 during Harvey and then expert witnesses to address what  
23 may have occurred had the corps taken alternative  
24 action.

25 The United States will present fact

1 witnesses, both current and former corps employees, who  
2 will explain that although the term "ordinary operating  
3 procedure" isn't a term defined or typically used by  
4 the corps, the Harvey event was not normal flood  
5 control operations, it was an emergency, and they took  
6 extraordinary actions to ensure the integrity of the  
7 dams and ultimately the safety of the public.

8           The United States will also present testimony  
9 of an expert flood modeler who will explain that  
10 flooding was unavoidable. Alternative action would  
11 have either shifted the flooding to other  
12 neighborhoods, increased dam safety risks, or made  
13 plaintiffs worse off or both. Plaintiffs, on the other  
14 hand, will attempt to revise the history of what was by  
15 any definition an emergency. The facts will show  
16 otherwise.

17           To date, Hurricane Harvey was the most  
18 significant tropical cyclone rainfall event in United  
19 States history both in scope and peak rainfall. The  
20 storm stalled for four days dropping more than  
21 60 inches of rain over Southeastern Texas, and  
22 approximately 33 inches of rain fell over Addicks and  
23 Barker alone. Harvey produced so much rain that the  
24 National Weather Service had to add two new colors to  
25 their precipitation forecasts. To compare, Hurricane

1 Helene, which recently devastated the Asheville,  
2 North Carolina area, dropped 14 inches of rain over  
3 Asheville. Harvey more than doubled that amount over  
4 Addicks and Barker alone.

5 Now, this tremendous amount of rainfall  
6 resulted in record flood pools in Addicks and Barker  
7 Reservoirs. In fact, the Harvey flood pools more than  
8 doubled the previous record flood pools which had just  
9 been set the previous year during the Tax Day Storm of  
10 2016.

11 Your Honor just heard that plaintiffs claim  
12 that Harvey was not an emergency. But the  
13 unprecedented magnitude of Harvey was reported not just  
14 in Houston, not just in Texas, but nationwide. News  
15 outlets around the country were reporting on Harvey's  
16 catastrophic flooding beyond anything experienced in  
17 Houston. Harvey's epic destruction caused by the  
18 heaviest rain in history, an unprecedented and landmark  
19 disaster.

20 Now, the evidence will show that since 1962  
21 when all five of the outlets on each dam were gated,  
22 the corps has operated the dams according to a Water  
23 Control Manual. The Water Control Manual, which was  
24 updated in 2012 and in effect at the time of Harvey,  
25 contains provisions for two distinct operating

1     circumstances: one, normal flood control regulation;  
2     two, induced surcharge flood control regulation.

3             The United States will present testimony of  
4     Mr. Robert Thomas, a highly trained dam safety engineer  
5     and the Addicks and Barker dam safety officer appointed  
6     by the corps who was present during the entire Harvey  
7     event, who will explain that these operating categories  
8     are mutually exclusive. Operations fall into either  
9     normal flood control or induced surcharge flood control  
10    operations.

11            Mr. Thomas will testify that prior to Harvey,  
12    the corps had always operated the dams under normal  
13    flood control operations. It was not until Harvey that  
14    the corps operated the dams pursuant to the induced  
15    surcharge flood control regulation for the first time  
16    in the history of the project.

17            Mr. Thomas will explain that the Water  
18    Control Manual governs the corps' operation of the  
19    dams. But as with any entity responsible for the  
20    safety of the public, the corps has a plan for  
21    emergencies. It's called the Emergency Action Plan.  
22    Mr. Thomas will testify that the Emergency Action Plan  
23    exists to identify emergency situations that could  
24    threaten the integrity of the dams. And it helps plan  
25    for expedited and coordinated responses to ultimately

1 protect lives and reduce property damage from dam  
2 failure or uncontrolled releases of water.

3 And Mr. Thomas will testify that this plan  
4 becomes automatically effective upon one of two  
5 scenarios: one, upon actual or predicted water surface  
6 elevations reaching designated limits or, two, when the  
7 dam safety officer declares an emergency.

8 Now, plaintiffs insist that the Emergency  
9 Action Plan can only take effect upon the second  
10 scenario, declaration by the dam safety officer. But  
11 this ignores the plain language of the Emergency Action  
12 Plan which clearly sets forth two distinct triggering  
13 events. Mr. Thomas will explain that upon either  
14 event, the Emergency Action Plan automatically takes  
15 effect. And Mr. Thomas will also testify as to all of  
16 the other reasons, in addition to implementation of the  
17 emergency action plan, why Harvey was an emergency  
18 situation even before the surcharge releases began,  
19 including the record rapidly raising flood pools,  
20 upstream flooding beyond government-owned land, and  
21 uncontrolled releases flowing around the north end of  
22 the Addicks Dam.

23 Now, plaintiffs misconstrue the Emergency  
24 Action Plan and claim Harvey wasn't an emergency.  
25 According to plaintiffs, the extraordinary flooding and

1 the corps' herculean response were just ordinary  
2 operating procedure, not an emergency. And instead of  
3 telling the court about the facts plaintiffs will show  
4 at trial, they told the court the arguments they'll  
5 make, and that's because plaintiffs don't have the  
6 facts to support their case. Rather, plaintiffs will  
7 invite the court to ignore what was actually happening  
8 during Harvey and instead focus on several  
9 cherry-picked deposition statements that lack  
10 foundation and context.

11 And now because, Your Honor, we did discuss  
12 the use of deposition testimony in opening and Your  
13 Honor ruled that that would be allowable, we were going  
14 to cite some deposition testimony just to provide some  
15 further context for the court.

16 Now, plaintiffs played a clip from one of  
17 Mr. Thomas' deposition where he stated that he was not  
18 aware of any formal declaration of a Level 1, 2, or 3  
19 emergency. The plaintiffs omit Mr. Thomas' testimony  
20 which immediately preceded the statement plaintiffs  
21 chose to play where Mr. Thomas stated that during  
22 Harvey, Emergency Level 2 under the Emergency Action  
23 Plan was reached. And now at trial, Mr. Thomas will  
24 explain that there's no formal declaration of emergency  
25 because the EAP doesn't require a formal declaration.

1 Rather, Emergency Level 2 is reached based on  
2 observation and the implementation of the rules and  
3 guidance in the Emergency Action Plan.

4 Plaintiffs also played a video clip from  
5 retired Colonel Lars Zetterstrom, the district  
6 commander of the Galveston District at the time of  
7 Harvey. Now, Colonel Zetterstrom will testify that on  
8 August 22nd, 2017, before Harvey made landfall, Colonel  
9 Zetterstrom declared an emergency for the entire  
10 district, the entire Galveston District. That covered  
11 Addicks and Barker Dams when the concern over the  
12 storm's worst effects shifted from the coastline where  
13 the Hurricane first made landfall to inland areas and  
14 specifically to the dams. Colonel Zetterstrom will  
15 explain the decision-making throughout the Harvey  
16 event, why it was an emergency, and why waiting until  
17 dam failure is imminent is too late to prevent disaster  
18 of catastrophic proportions. And the full testimony at  
19 trial will show that the Harvey event was an emergency  
20 and the corps' actions to manage it were anything but  
21 ordinary; they were extraordinary.

22 Now, witnesses from the corps will tell the  
23 court what actually happened from the standpoint that  
24 matters, the decision-makers.

25 Let's look at the reservoirs just to orient a

1     brief timeline of events. Both of the reservoirs,  
2     Addicks and Barker, are ordinarily dry. They have two  
3     emergency spillways, both north and south, and gated  
4     outlet structures. Water enters the reservoirs through  
5     direct rainfall or runoff from upstream watersheds.

6             The evidence at trial will show the following  
7     timeline of events: On August 22nd, before Harvey made  
8     landfall, Colonel Zetterstrom issued a declaration of  
9     emergency for the entire district for Harvey. On  
10    August 23rd, the corps activated the Addicks-Barker  
11    Multi-Agency Emergency Coordination Team, or ABECT.  
12    And as early as August 23rd, the corps' forecast were  
13    projecting that pools at both Addicks and Barker would  
14    exceed the limits of government-owned land. Thus, as  
15    of August 23rd, when the reservoir flood pools were  
16    projected to exceed the limits of government-owned  
17    land, the emergency action plan became automatically  
18    effective at Emergency Level 2.

19            When Harvey made landfall as a Category 4  
20    hurricane on August 25th, both reservoirs were empty  
21    and the gates were set to allow the inflows to pass  
22    through and flow downstream. But in accordance with  
23    the Water Control Manual, the corps closed the gates on  
24    both dams to protect against downstream flooding.

25            By August 26th, the corps' forecast projected



1     that existing record flood pools would be exceeded.  
2     And by late on the 26th and early on the 27th, the  
3     corps' forecast noted that the flood pools would rise  
4     even higher and faster than previously expected and  
5     that water would begin to flow around the ends of the  
6     dams.

7             The corps held back an incredible amount of  
8     water as long as they could safely do so. But at this  
9     time, the corps projected that releases would be  
10    necessary under the induced surcharge provision of the  
11    Water Control Manual. And just as the corps followed  
12    the Water Control Manual in closing the gates at the  
13    beginning of the storm, they determined that the Water  
14    Control Manual called for induced surcharge releases  
15    because of both the flood pool elevation and the rate  
16    in which the flood pools were rapidly rising.

17            So shortly after midnight on August 28th, the  
18    corps began making reservoir releases under the induced  
19    surcharge provision for the first time in the more than  
20    80-year history of the Addicks and Barker project.

21            But even after these releases began, the  
22    flood pools and the attendant risks with those large  
23    flood pools kept rising. On August 29th, water began  
24    to flow uncontrolled around the north end of Addicks.  
25    And so that would be the north emergency spillway you

1 see at the top right-hand corner of the screen.

2 THE COURT: My view of -- okay. I can see  
3 it. It was partly blocked by the eagle.

4 MS. MORRIS: And then as the rain finally  
5 subsided on August 30th, the flood pools peaked,  
6 two days after mandatory releases began. And that the  
7 peak of the flood pools on August 30th, it was  
8 difficult to tell what's upstream and what's downstream  
9 of the dams. Water was simply everywhere.

10 Induced surcharge releases continued until  
11 September 16th when the flood pool levels finally  
12 sufficiently lowered to return to normal flood control  
13 operations. But even then, normal flood control  
14 releases continued. The reservoirs were not fully  
15 emptied of floodwaters until mid-October.

16 Far from ordinary. The corps' actions taken  
17 to manage the emergency imposed by Harvey were not only  
18 extraordinary, they were brave. Your Honor is going to  
19 hear from several corps employees who attended to the  
20 dams 24/7 through torrential rain with little to no  
21 sleep at a time so they could monitor the dams for  
22 safety issues. You'll hear that corps employees were  
23 rescued from their own vehicles which were submerged  
24 while trying to monitor dam conditions.

25 You'll hear that for the first time in the

1 history of the project the gauges that typically  
2 measure the flood pool elevations, they were at risk of  
3 being inundated and had to be relocated to a higher  
4 location. And during this time, the corps was required  
5 to take manual measurements by plumb bob every hour  
6 while the gauges were inoperable.

7 You'll hear that the flood pools rose so high  
8 that the dam operation platforms flooded, and so the  
9 corps had to cut power to avoid electrocution which  
10 then required manual operation of the massive gates.

11 You will hear that the corps had to evacuate  
12 the Addicks and Barker Project Office, which is located  
13 just downstream of the Barker outlets and which Your  
14 Honor will see on the site visit next week, due to  
15 flooding, and that was before any releases were made,  
16 and they had to relocate to the National Guard nearby.

17 You will hear from employees who were away  
18 from their own families trying to plan for their  
19 family's safety while they experienced flooding while  
20 constantly monitoring the safety of the dams.

21 You'll hear that as this unprecedented  
22 situation unfolded, the corps operated knowing that the  
23 Addicks and Barker Dams were classified as the highest  
24 risk rating in the country. This was due to known  
25 issues with the dams' outlet structures which were in

1 the process of being replaced at the time Harvey hit,  
2 but also due to the significant risks to life and  
3 property associated with dam failure.

4 The dams had never before held back this  
5 volume of water. The closest flood pool was less than  
6 half the volume of Harvey. This was an untested volume  
7 of water, and it was with an unknown outcome. The  
8 gates had never been tested at this level of risk. And  
9 there's no easy way to put it. If the dams failed,  
10 you'll hear that hundreds of thousands of lives if not  
11 more would be at risk.

12 Now, the court has also asked the parties to  
13 present evidence on what would have happened if the  
14 gates on both dams had remained closed and related what  
15 would have happened if the corps had taken alternative  
16 action.

17 Now, as the United States has previously  
18 explained, to the extent these questions relate to the  
19 United States' defense of necessity, evidence should be  
20 limited to the actual information known to the corps  
21 while it was operating the project prior to and during  
22 Harvey. Hindsight or after-the-fact analysis including  
23 opinions of whether the dams would have failed if the  
24 gates had remained closed is irrelevant. What matters  
25 are the facts that were before the decision-makers at

1 the time they made the decisions.

2 But to the extent the court finds expert  
3 opinions helpful in assessing the reasonableness of the  
4 corps' actions compared to alternatives, the parties  
5 will present expert testimony and several hypothetical  
6 scenarios.

7 You will hear testimony from plaintiffs'  
8 expert flood modeler, Mr. Matthew Bardol, who we expect  
9 will make the conclusory claim that the releases were  
10 not necessary. But Mr. Bardol was not present during  
11 Harvey, he's not a geotechnical expert, and he did not  
12 analyze what would have happened to the dams themselves  
13 had the corps not made releases.

14 Mr. Bardol did analyze what would have  
15 happened to the properties had the corps kept the gates  
16 closed, and he'll admit that upstream properties would  
17 have experienced deeper and longer flooding, up to one  
18 to two feet deeper, and approximately 3,000 additional  
19 acres of land flooded.

20 And Mr. Bardol will also admit that both he  
21 and the United States' expert, Dr. Robert Nairn, agree  
22 that had the corps kept the gates closed, additional  
23 uncontrolled water would have flowed around the end of  
24 Addicks, flooding other downstream properties while  
25 simultaneously increasing the risks.

1           The court will also hear from the United  
2   States' expert, Dr. Nairn, who completed modeling in  
3   both upstream and downstream cases and assessed what  
4   would have happened if the corps had taken alternative  
5   actions, including had the corps kept the gates closed.  
6   And he'll explain that had the corps not followed the  
7   Water Control Manual and kept the gates closed,  
8   flooding would not have been eliminated but transferred  
9   to other upstream and downstream properties.

10           Dr. Nairn will also testify as to what would  
11   have happened if the corps had not followed the Water  
12   Control Manual and never closed the gates in the first  
13   place and also if the corps had never built the Addicks  
14   and Barker Project. Had the corps taken these  
15   alternative actions, the consequences for downstream  
16   plaintiffs would have been drastically worse.

17           At the end of this trial, Your Honor will be  
18   asked to determine whether the worst rainfall event in  
19   United States history, an act of God which threatened  
20   to inundate the fourth largest city in the country,  
21   home to over two million people, was an emergency. You  
22   just heard plaintiffs say that Harvey was not an  
23   emergency because the dams did not reach a point of  
24   imminent failure.

25           To suggest that the corps must wait to act

1     until the dams are in the process of failing is nothing  
2     short of astonishing. The corps cannot roll the dice  
3     with people's lives. The evidence will show that once  
4     dam failure is imminent, it's too late for releases to  
5     make a difference. There's no going back. Given the  
6     consequences to life and property, waiting to act until  
7     dam failure is imminent would not only be unreasonable,  
8     it would be unconscionable.

9             Now, earlier this morning, plaintiffs'  
10    counsel said that it's a disaster if your house burns  
11    down; it's an emergency if your house is on fire. Your  
12    Honor, during Harvey, the house was on fire, and the  
13    corps took action to prevent it from burning down. At  
14    the end of the trial, the United States will ask Your  
15    Honor to find that Harvey was an emergency for which  
16    the corps took extraordinary actions to ensure the  
17    safety of the dams and ultimately the safety of the  
18    public. Thank you.

19            THE COURT: Thank you.

20            Well, you've both presented I think good,  
21    clear pictures of where your cases are going,  
22    contradictory pictures.

23            So we now have -- it's, I guess, about 12:30.  
24    Do we want to take a lunch break or is there something  
25    we can do? What makes sense in terms of the various

1 two legal teams we have?

2 MR. McGEHEE: Your Honor, our first witness  
3 is an expert. I could qualify him and give an overview  
4 of what he's going to speak to in 30 or 40 minutes, if  
5 you would like to try that.

6 THE COURT: Yeah, why don't we try that since  
7 we got a late start. I hope I'm not putting anyone  
8 under stress by missing a lunch break. Maybe we can  
9 after this witness then take a brief lunch break.

10 MR. McGEHEE: Your Honor, the plaintiffs call  
11 Matt Bardol.

12 THE COURT: Okay.

13 Mr. Bardol, if you'll come forward.

14 Mr. Bardol, if you'll raise your right hand. And I  
15 would say put your left hand on the Bible, but we don't  
16 have a Bible here in the courtroom. And somehow using  
17 the Federal Rules of Evidence wouldn't be as good.

18 Thereupon--

19 MATTHEW BARDOL

20 was called as a witness and, after having been first  
21 duly sworn, testified as follows:

22 THE COURT: Thank you very much.

23 MR. McGEHEE: Your Honor, would you prefer me  
24 to speak from the podium?

25 THE COURT: Whichever you prefer. That makes



1 better for the record since it's being recorded, so...

2 MR. McGEHEE: I understand.

3 THE COURT: If you need to approach the  
4 witness, you may.

5 MR. McGEHEE: Thank you, sir.

6 DIRECT EXAMINATION

7 BY MR. McGEHEE:

8 Q. Mr. Bardol, before I ask you to address the  
9 questions that were posed by the judge, I'd like you to  
10 explain to him why you're qualified to do so. First of  
11 all, introduce yourself, tell him where you're from and  
12 what's your job.

13 A. All right. Yes.

14 Hello, sir. My name's Matt Bardol. I'm  
15 senior principal at Geosyntec Engineering. Been there  
16 for 15 years. My primary job and role as an expert,  
17 I'm a professional engineer. I graduated from  
18 University of Notre Dame for undergrad in civil  
19 engineering. I went to ROTC, was in the Air Force for  
20 seven years. I was stationed at Dyess Air Force Base  
21 in Abilene, Texas. There I went back, I got my  
22 master's degree from Hardin-Simmons University,  
23 environmental management. From there I moved to  
24 Southern California, Los Angeles, also with the Air  
25 Force. I -- with that, I did civil engineering

1 focusing in water resources from the University of  
2 Southern California. With that, I'm licensed in the  
3 State of California, Texas, and seven other states to  
4 be a professional engineer.

5 Q. What certifications do you hold?

6 A. Certifications, in addition to being a  
7 professional engineer, I'm also a certified floodplain  
8 manager, a CFM. That's through the State of Illinois,  
9 but that's also recognized nationally. Certified  
10 Professional in Erosion and Sediment Control, CPESC.  
11 I've held that for multiple years. And then also  
12 through the American Academy of Water Resource  
13 Engineers I'm a diplomat, water resources engineer.  
14 Those are only for individuals with over ten years of  
15 experience that have continuous doing civil engineering  
16 within water resources.

17 Q. And let's start at the beginning of your  
18 career in the United States Air Force. What did you do  
19 that relates to the questions that I'm going to be  
20 asking you today?

21 A. Yes. Yeah, so I was a civil engineer. But  
22 also part of that, one of my first jobs, I was in Dyess  
23 Air Force Base, I was called a disaster preparedness  
24 engineer, a readiness officer. So with that was for  
25 command and control responding to natural disasters or

1 other disasters, so I ran a crew there for doing  
2 emergency action plans for responses to base both  
3 natural disasters, terrorist threats, and wartime  
4 threats as well.

5 Q. Now, you just hit a buzz word, emergency  
6 action plans. Tell us --

7 A. Yes.

8 Q. -- your experience writing, editing,  
9 reviewing, enforcing them.

10 A. Yes. So while I was in the Air Force, I  
11 prepared emergency action plans for natural disasters.  
12 I ran the crews, the command and control. So through  
13 part of that was reviewing that to make sure they were  
14 up to date. So that was while I was in the Air Force.  
15 But prior, after that, being a civil engineer in my  
16 current role at Geosyntec and prior firms is doing dams  
17 inspections, doing the hydrology hydraulics for the  
18 design of spillways, looking at the PMF, the probable  
19 maximum flood, tying that all back into the dam  
20 structure itself. And part of that is writing or  
21 updating emergency action plans such as the one that  
22 was written here for the Addicks and Barker.

23 Q. Jumping over to the other buzz word, water  
24 control manuals. What experience do you have in  
25 writing, editing, reviewing, enforcing water control

1 manuals?

2           A.    Yes.  So water control manuals, as far as how  
3 the gates would operate.  So there's several dams that  
4 I've worked on in the past that were gated.  Some do  
5 not.  But usually even if it's not a gated structure,  
6 it's looking at the outfall structure through the  
7 emergency -- through emergency act- -- or looking at  
8 flood control regulations if the outlets are blocked  
9 and looking at flanking flows around auxillary  
10 spillways.

11           Q.    This isn't your first storm water analysis in  
12 your history, is it?  Tell us your experience working  
13 with stormwaters, working with things that pertain to  
14 our case.

15           A.    Yes, sir.  You know, so I've been a civil  
16 engineer for almost 30 years now, but a little over 28.  
17 I've been at my current firm for 15, but also been a  
18 consulting engineer for about seven years prior to  
19 that.  So, you know, about 25 years being a consulting  
20 engineer -- or 22.  Part of that is looking at urban  
21 flood controls such as in Houston, but also looking at  
22 large dam spillways, flood control facilities, and  
23 urban environment.  So it's looking at the hydrology,  
24 the rainfall, looking at the hydraulics of the spillway  
25 in and around urban environments within the channels

1 such as the Buffalo Bayou, but then also releases from  
2 large flood control facilities such as the Addicks and  
3 Barker Reservoirs.

4 Q. You did a model for this case. This wasn't  
5 your first model, was it?

6 A. No, I did -- I did one for this. It was  
7 definitely not my first model that I worked on, yes.

8 Q. Tell us briefly your experience in making  
9 models such as this case.

10 A. Okay. The approach that we used on this was  
11 following similar to what the Harris County Flood  
12 Control District would have done with the -- to the  
13 models, HEC-HMS and HEC-RAS, for the hydraulics. So  
14 it's a standard in the United States as far as the --  
15 for the hydrology, hydraulics. Have used those for  
16 just urban flood control, but also doing those same  
17 type of models both 1D, one-dimensional, but then also  
18 the two-dimensional. Two-dimensional that we used for  
19 upstream, I used those for probably about 30 different  
20 dams-related projects as far as designing spillways,  
21 updating emergency action plans, and then looking at  
22 dam breach scenarios.

23 Q. Do any government agencies use the models  
24 that you used?

25 A. They're standard practice throughout the US,

1     yes. Pretty much all government agencies will accept  
2     them, and it's the preferred model through the Army  
3     Corps of Engineers and Harris County Flood Control  
4     District.

5           Q. So your model today is generally accepted in  
6     the engineering community?

7           A. Yes, it is, correct.

8           Q. Okay. You have here specific training in  
9     emergency responses. We're going to talk a lot about  
10    that.

11          A. Yes.

12          Q. Tell us your background in reviewing,  
13    identifying, writing emergency responses.

14          A. Yes. So it started off while I was in the  
15    Air Force, a readiness officer, so I went through  
16    several different trainings while I was in the Air  
17    Force for doing disaster response. Part of that was  
18    with Fort McClellan which was for, on one hand, was a  
19    chemical warfare defense, but it was also just command  
20    and control during emergency response in the US. It's  
21    how to respond, how to follow a manual for the  
22    emergency response, and then do the command and  
23    control, passing it over to another authorized  
24    individual for the command and control. So that was in  
25    the Air Force.

1           Since the Air Force, on the consulting side,  
2   a lot of conferences as far as looking at emergency  
3   action plans and how to respond or look at and analyze  
4   dams both in the operational side, designing it, but  
5   then also looking at dam breach or other emergency  
6   action plans, how they would be implemented for looking  
7   at the control of the facility itself.

8           Q.   And the questions the judge asked are not  
9   about the danger and the emergencies involved with  
10   Hurricane Harvey; they involve the dangers and  
11   emergencies involved in opening the gates at  
12   Addicks-Barker. Do you understand that distinction?

13          A.   Yes, I do.

14               MR. McGEHEE: At this point, Your Honor, I  
15   would offer Mr. Bardol as an expert to testify today  
16   and offer his Exhibit PX 290 into evidence.

17               And let me just ask the qualification  
18   questions.

19   BY MR. McGEHEE:

20          Q.   Have you reviewed your CV?

21          A.   Yes, I have.

22          Q.   Does this fairly and accurately describe your  
23   professional career up and to the present?

24          A.   It does, yes.

25          Q.   Thank you.

1 THE COURT: Okay.

2 Does the government have any objection?

3 MS. DUNCAN: Yes, Your Honor, we do have an  
4 objection.

5 THE COURT: Okay.

6 MS. DUNCAN: We don't object to Mr. Bardol  
7 testifying as to his opinions on the hydraulic modeling  
8 as set forth in his report or his role as a hydrologist  
9 regarding inundation on properties downstream.  
10 However, we do object to him offering any opinions  
11 regarding the integrity of the dam as outlined in  
12 Section 8 of his report, he's not a geotechnical  
13 engineer, opinions about whether or not there was an  
14 emergency and opinions in comparison with the United  
15 States expert. May I elaborate?

16 THE COURT: Okay.

17 MS. DUNCAN: Okay. As we've noted,  
18 Mr. Bardol is not a geotechnical engineer, so any  
19 opinions about the necessity of releases in regard to  
20 dam safety are beyond his scope of expertise. I just  
21 want to draw a line in the sand there early.

22 As to emergency, Mr. Bardol can't offer  
23 opinions about whether there was an emergency that  
24 necessitated releases or not. Unlike the corps  
25 witnesses who were working at the project during the



1 event, Mr. Bardol has no firsthand knowledge of the  
2 Harvey event and dam operations, and any opinion,  
3 therefore, would need to fall within the strictures of  
4 the expert rules, including 702.

5 And so whether there was an emergency was  
6 also not a properly disclosed or supported opinion in  
7 his expert report. The only mention of emergency  
8 conditions is in just over one page in the factual  
9 background portion of his report. It's not in the  
10 methodology section of his report which is dedicated to  
11 flood modeling, what he's actually qualified to do  
12 here.

13 And he also doesn't include any conclusions  
14 about emergency in the opinions portion of his report.  
15 There's not even a clear method for this purported I  
16 think claim of an emergency or the necessity related to  
17 it. There's not a clear standard. You will hear there  
18 is about one part of the report that relates potential  
19 emergency to dam failure. He's, of course, not  
20 qualified to speak to that.

21 At bottom, Your Honor, plaintiffs attempt to  
22 turn their flood modeler into an expert on dam safety  
23 emergencies, fails to meet the strictures of Rule 702  
24 and Rule 26, and it's not even consistent with sort of  
25 the standards outlined in EAP or in -- for the legal

1 standard.

2 And, finally, we also object to plaintiffs --  
3 to the extent he intends to offer comparison to  
4 Dr. Nairn's results in detail, we do object to that as  
5 an improperly disclosed opinion.

6 THE COURT: All right. It seems to me that  
7 those objections go to substantively parts of the  
8 testimony whether they're appropriate for an expert.  
9 So it seems to me he's qualified clearly to be an  
10 expert. The specific areas need to be carved out by  
11 specific questions and I can rule on those. A general  
12 ruling denying him expert status is not justified based  
13 on what I've heard so far. So I'll allow his  
14 qualification as an expert and then permit the  
15 government if you object to a specific question that he  
16 goes beyond his expertise, raise it at that point.

17 MS. DUNCAN: Yes, Your Honor.

18 THE COURT: All right.

19 MR. McGEHEE: Yes, sir. I'd like to now --  
20 it's hard to not publish something in a bench trial, so  
21 I'm going to ask Your Honor to be prepared to forget  
22 about this if it's not admitted.

23 BY MR. McGEHEE:

24 Q. But I'd like to ask the witness if you've  
25 seen this before and if this blowup in your opinion

1 fairly and accurately depicts the inundation area, the  
2 location of all of the test properties, the Addicks and  
3 Barker Reservoirs, the end of the dams, and the  
4 outlets.

5 THE WITNESS: It does, yes. I've seen it and  
6 it does accurately represent.

7 THE COURT: Can you hold that up,  
8 Mr. McGehee?

9 MR. McGEHEE: Yes, sir.

10 THE COURT: Okay. That's what we saw on the  
11 screen earlier?

12 MR. McGEHEE: Exactly, sir.

13 THE COURT: Okay.

14 MR. McGEHEE: And, sir, at this point, we  
15 would offer I think we're going to call it Plaintiffs'  
16 Exhibit 465 for demonstrative purposes.

17 THE COURT: Okay.

18 MR. McGEHEE: I said it wrong, Judge. 405  
19 for demonstrative purposes.

20 THE COURT: Okay. That will be corrected in  
21 the record.

22 (Admitted Exhibit No. PX 405.)

23 BY MR. McGEHEE:

24 Q. I want to just get an overview of what we're  
25 talking about today, Mr. Bardol. First of all,

1 Hurricane Harvey, there were thousands of bad things  
2 that happened about Hurricane Harvey. It set all kinds  
3 of records. What I'd like to do is concentrate on how  
4 each reservoir responded to Hurricane Harvey.

5 A. Okay.

6 Q. And I want to talk about whether -- how close  
7 to 100 percent capacity each reservoir came during  
8 Hurricane Harvey.

9 First of all, if they go to 100 percent  
10 capacity, does that in and of itself constitute an  
11 emergency?

12 A. In and of itself, no.

13 Q. Why not?

14 A. They're designed to have the auxillary  
15 spillways, you know, so they've been analyzed for much  
16 larger storms than Hurricane Harvey to be able to  
17 operate safely.

18 Q. Okay. Let's talk about capacity. And I'm  
19 not a hydrologist, nor am I an artist. So let me do my  
20 best to draw Addicks Reservoir.

21 MR. McGEHEE: And just as a gesture of  
22 courtesy, from time to time I'm going to allow you to  
23 see that.

24 And, Your Honor, I'd like to publish it to  
25 the homeowners as well.

1 THE COURT: Okay.

2 MR. McGEHEE: A picture of the land and of  
3 Addicks Reservoir.

4 BY MR. McGEHEE:

5 Q. And then I want to -- just assume with me --

6 THE COURT: Is that like a cross-section of  
7 the land?

8 MR. McGEHEE: Yes, sir. Yeah, this is  
9 looking at it from ground level.

10 THE COURT: Okay.

11 MR. McGEHEE: This is upstream property and  
12 this is downstream, and our test properties are down  
13 here.

14 THE COURT: Okay.

15 BY MR. McGEHEE:

16 Q. With that, I'm going to draw a water level,  
17 and I just want you to assume that that's a hundred  
18 percent capacity. Do we know about how many acre-feet  
19 it takes to fill Addicks Reservoir up to 100 percent  
20 capacity? And I would invite you to use the Emergency  
21 Action Plan at page E2 as a reference.

22 A. If you could just slide it up slightly so I  
23 could see it a little bit lower. Yeah, there we go.  
24 Yeah, thank you.

25 Yeah, so as far as on the -- on the capacity,

1 looking at this from the design perspective from the  
2 spillway design flood, assuming that being the hundred  
3 percent of the design capacity for the spillway design  
4 flood looking at the spillway which would be on --  
5 having flows through the auxillary spillways, that acre  
6 foot of storage would be the 329,676-acre feet, and  
7 that would be up to elevation of 115.

8 Q. And I've written on here what you just said,  
9 acre-feet up to an elevation on Addicks Reservoir of  
10 115 feet. Is that just what you said?

11 A. Yes, it is.

12 Q. And that represents 100 percent capacity,  
13 correct?

14 A. Compared to the spillway design flood, yes.

15 Q. Yeah.

16 THE COURT: And 115 is the altitude above sea  
17 level?

18 THE WITNESS: Yes, it would be using the --  
19 using the local datum, yes. It would be the elevation.

20 BY MR. McGEHEE:

21 Q. And let's look at another -- there's water  
22 coming into Addicks Reservoir and there's a hundred  
23 percent capacity of water that can be permitted to run  
24 into Addicks Reservoir, and I'm going to signify that  
25 with arrows to the right.

1                   What is the hundred percent capacity  
2     permitted for water to flow into Addicks Reservoir  
3     measured in cubic feet per second?

4           A.     Can I pull up -- it was --

5           Q.     Sure.

6           A.     There's a different graph within the Water  
7     Control Manual. If I can pull it up --

8           Q.     You can.

9           A.     -- and I'll just reference so they can --

10           MS. DUNCAN: Objection, Your Honor. It's not  
11     clear how this relates to Mr. Bardol's opinion that is  
12     actually disclosed within his report. This doesn't  
13     relate to flood modeling and the inundation downstream,  
14     which is not objectionable. And it's not clear what  
15     other sort of opinion he is offering that's within his  
16     report that this sort of information would go to. This  
17     is factual information.

18           MR. McGEHEE: And, Judge, we're going to show  
19     that Addicks was nowhere near full capacity.

20           THE COURT: Okay. I'll allow it for that  
21     purpose.

22     BY MR. McGEHEE:

23           Q.     Was the cfs 294,000?

24           A.     It was 294,507 cfs, and that's on the back of  
25     the Water Control Manual. I can give you the plate

1 number. Plate 8-01.

2 Q. And I'm going to indicate that that's  
3 100 percent capacity for Addicks Reservoir; is that  
4 fair?

5 A. Correct. That's at the -- the spillway  
6 design flood, that's the peak flow that it was designed  
7 for, and that's the capacity or the full volume that  
8 was within Addicks.

9 Q. Right.  
10 And had we reached that, which we didn't, but  
11 had we reached that, would that in your opinion  
12 constitute an emergency that would necessitate opening  
13 the gates?

14 MS. DUNCAN: Objection, Your Honor. This  
15 calls for an opinion that was not properly disclosed  
16 within the report and he's not qualified to provide it  
17 here.

18 THE COURT: Mr. McGehee?

19 MR. McGEHEE: Judge, it's throughout his  
20 report. It's at Section 2.2, 2.3, and 2.4. And his --  
21 the entire purpose for qualifying him and being here  
22 and writing the report is to discuss emergencies and  
23 gates closing.

24 MS. DUNCAN: I disagree. May I do a brief  
25 voir dire?



1 THE COURT: Do we have the report page that  
2 he uses, these figures? Do we have that here?

3 MR. McGEHEE: Yes. Can you --

4 THE WITNESS: Yeah.

5 MS. DUNCAN: And, Your Honor, it's more than  
6 just the figures. To be clear, it's this question of  
7 whether the spillway design flood constitutes an  
8 emergency. That's not an opinion that was disclosed.

9 THE COURT: If you'll ask your question as to  
10 how that relates to an emergency or how that relates to  
11 his opinions.

12 BY MR. McGEHEE:

13 Q. Mr. Bardol, I'm referring to the two  
14 questions that the judge asked.

15 A. Yes.

16 Q. In your opinion, is 100 percent capacity for  
17 acre-feet and 100 percent capacity for cubic feet per  
18 second, does that constitute an emergency that would  
19 necessitate opening the gates?

20 MS. DUNCAN: Objection. This calls for an  
21 undisclosed expert opinion.

22 THE COURT: Yeah, I think I agree, so I'll  
23 sustain the objection.

24 BY MR. McGEHEE:

25 Q. What was the capacity -- what was the actual

1 capacity in acre-feet for Addicks Reservoir during  
2 Hurricane Harvey?

3 A. Yeah, it filled up to an elevation of 109.1.  
4 And on this table, it indicates 199,000-acre-feet at  
5 108. Prorating that up to the 109.1, it's about  
6 230-acre-feet, approximately, that it was -- was stored  
7 behind.

8 Q. 230,000?

9 A. Correct, yes.

10 And then just to give context to that volume  
11 right there, Hurricane Harvey, it was over several  
12 days, about a four-day storm, it was about -- it was --  
13 the spillway design flood that creates the 329, there's  
14 also water that they assume is in the reservoir at that  
15 time, but then there's 44 inches of rain that happens  
16 over just I believe it's a 72-hour period. So it's a  
17 very high intensity storm, 44 inches that came. So  
18 it's much higher than what Hurricane Harvey was. So  
19 that's where -- the relevancy between these different  
20 numbers. The 230-acre-feet was for massive storm  
21 Hurricane Harvey, but that was still significantly  
22 lower than what the design capacity of the reservoir  
23 would be with the auxillary spillways being able to  
24 function.

25 Q. Just dividing one by the other, what was the

1 capacity in acre-feet of --

2 A. About 66 percent. 230-acre-feet is about  
3 66 percent of the total capacity that could have been  
4 in -- within the Addicks Reservoir.

5 THE COURT: So what is the basis of that  
6 figure that it's within 80 percent of --

7 THE WITNESS: I -- sorry, Judge?

8 THE COURT: -- the reservoir?

9 I think you just said 80 percent, the 329.

10 THE WITNESS: Oh, it was 66 percent. So the  
11 230-acre-feet is about 66 percent of that total volume  
12 that would have been stored behind the reservoir for  
13 the spillway design flood scenario with the two  
14 different auxillary spillways being operated. So the  
15 reservoir was designed to operate up to that level.

16 THE COURT: Up to the -- okay. What is the  
17 total level then that could go -- that's beyond 329?

18 THE WITNESS: Beyond that, the -- the corps  
19 in their manual have designed and analyzed it up until  
20 the elevation of 115, the elevation that has a storage  
21 of 329,000-acre-feet. So that's the top analyzed and  
22 performed analysis for the dam itself along with the  
23 spillways.

24 THE COURT: Okay. So there's nothing beyond  
25 that.

1 Now, did it go beyond that in this flood?

2 THE WITNESS: Oh, no, it never got close to  
3 that. This is 115. Hurricane Harvey only went up to  
4 109. I say "only." It was a big storm. It went up to  
5 109.1. So it still had another, you know, six feet  
6 before it got up to the 115. The top -- the high point  
7 of the dam is 121. Yeah, 121. So the top of the dam  
8 is another six feet. But that was not analyzed part of  
9 the Emergency Action Plan or part of the Water Control  
10 Manual.

11 THE COURT: Okay. So 329 was the top figure  
12 for the plan?

13 THE WITNESS: 329,000-acre feet was the total  
14 volume that was calculated part of the analysis for  
15 the -- within part of the Water Control Manual, yes.

16 THE COURT: Okay. Thank you.

17 BY MR. McGEHEE:

18 Q. Now, the same questions for the inflow. You  
19 said the 100 percent capacity for 294,000 cubic feet  
20 per second represents a hundred percent. What was the  
21 actual inflow during Hurricane Harvey?

22 A. It was about 74,000 cubic feet per second was  
23 the approximate inflow during Hurricane Harvey. And  
24 the 294,000 approximately there, that was when the  
25 corps analyzed this for the spillway design flood, the

1 peak inflow for that specific storm.

2 THE COURT: Okay.

3 BY MR. McGEHEE:

4 Q. And if -- so based on that, do the arithmetic  
5 and tell us what capacity was flowing into Hurricane  
6 Harvey, what was flowing into Addicks Reservoir during  
7 Hurricane Harvey?

8 A. Yeah, that's --

9 MS. DUNCAN: Objection, Your Honor. We're  
10 now into more undisclosed opinions. I don't believe  
11 these calculations and the discussion of them is  
12 anywhere in his report.

13 THE COURT: Which calculations are you  
14 referring to?

15 MS. DUNCAN: These comparisons of Harvey to a  
16 spillway design flood.

17 THE COURT: Well, I'm not sure of having --  
18 I'm obviously not that familiar with the report.

19 Are these figures in your report?

20 THE WITNESS: This figure, the numbers as far  
21 as the spillway design flood, I do talk about it in  
22 Section 2 as far as what the design capacity that the  
23 44 inches was being the spillway design flood for that  
24 specific probable maximum flood, and then the peak  
25 elevation or the -- the volume that was in there. I do

1 reference those as far as part of the Emergency Action  
2 Plan and the Water Control Manual, those -- those  
3 numbers.

4 THE COURT: Okay. I'll allow the question.

5 MS. DUNCAN: Well, and, Your Honor, then we  
6 have a follow-on objection that there is high-level  
7 discussion of these general concepts in the background  
8 section but not as they relate to his opinions in this  
9 report, and so we'll just lodge an additional  
10 objection.

11 THE COURT: I'm not sure which opinions we're  
12 talking about at this point.

13 MS. DUNCAN: I think that's part of the  
14 problem, this isn't tethered to any sort of opinion.

15 THE COURT: What?

16 MS. DUNCAN: This testimony that we're  
17 hearing isn't tethered to any of the opinions that he  
18 has properly disclosed in his report.

19 THE COURT: Okay. I'll allow it to let him  
20 see if that's -- as it goes on whether there's the same  
21 problem in your view or not.

22 BY MR. McGEHEE:

23 Q. What's the percent of capacity for the cubic  
24 feet per second flowing into Addicks Reservoir during  
25 Hurricane Harvey?

1           A.    Yeah, looking at the numbers right now, it's  
2   probably, you know, 20-some percent.

3           Q.    So according to the Emergency Action Plan,  
4   are the gates open at any time when 329,000-acre-feet  
5   of water are in Addicks or if 294,000 cubic feet per  
6   second are flowing into Addicks? According to the  
7   Emergency Action Plan which you studied and discussed  
8   in your report, do these numbers trigger any  
9   emergencies according to the Emergency Action Plan?

10          A.    Well, the --

11               MS. DUNCAN: Objection, Your Honor. We do  
12   have a further objection on this. He's not been  
13   disclosed as an expert to provide opinions on whether  
14   there was an emergency. And he's talking about an  
15   Emergency Action Plan and whether there are gates that  
16   are -- were being operated. That's also not in his  
17   opinion.

18               THE COURT: Well, I think the questions  
19   relate to the Emergency Action Plan which is he an  
20   expert on, so I'll allow the questions.

21               MS. DUNCAN: Your Honor, may I just clarify?  
22   Can we clarify what exactly he's been qualified as an  
23   expert in? I was not tracking if he was qualified as  
24   an expert in Emergency Action Plan. I don't think we  
25   ever had a representation --

1           THE COURT: I thought that was the area that  
2 he was qualified in, so I rule that now at least to  
3 clarify if it wasn't clear before.

4           MR. McGEHEE: For the record, he was  
5 cross-examined in detail by opposing counsel during his  
6 deposition.

7           THE COURT: Okay.

8 BY MR. McGEHEE:

9           Q. Does the Emergency Action Plan trigger any of  
10 these hundred percent capacity events to constitute an  
11 emergency?

12          A. Not that I know of. The Water Control Manual  
13 has the rate of rise of when they'd be opened, so that  
14 triggers that underneath the ordinary operating  
15 procedures for what would be the standing rules for the  
16 dam tender when they operate and when they close and  
17 open the gates.

18          Q. So based on your answer, a hundred percent  
19 capacity is not one of the triggering points under the  
20 Water Control Manual?

21          A. Just that number itself.

22          Q. And how about if we go down, down to  
23 66 percent capacity, same question.

24          A. The -- I just want to make sure I'm following  
25 you. The Emergency Action Plan is really the Water



1 Control Manual that's triggering when the gates are  
2 opened underneath the standing rules or engagement for  
3 the dam tender underneath ordinary operating procedure.  
4 So that's when it's triggered. And the --

5 MS. DUNCAN: Objection.

6 THE COURT: Well, don't -- let's not  
7 interrupt the question at this -- or the answer,  
8 rather.

9 You may go ahead.

10 THE WITNESS: Okay. Yeah, so it's in the  
11 Water Control Manual that constitutes when the gates  
12 are opened.

13 BY MR. McGEHEE:

14 Q. And the Water Control Manual is silent --

15 MS. DUNCAN: Objection.

16 THE COURT: What is the objection to the  
17 question?

18 MS. DUNCAN: Well, the objection goes to  
19 Mr. Bardol's testimony now getting into what is an  
20 ordinary operating procedure. That is a term of art  
21 Your Honor used in its order. It is found nowhere in  
22 Mr. Bardol's expert report. And it's found -- it  
23 was -- and it's not used in the Water Control Manual or  
24 the Emergency Action Plan either. So this is a new  
25 opinion he's forming for the purposes of this case

1 after the Rule 26 deadlines have passed.

2 THE COURT: Well, what he seems to be  
3 answering, and it seems that he's talking about facts  
4 related to what presumably have been the -- partly in  
5 the report is to what -- is there any operating  
6 procedure that requires you to open the gates if it  
7 gets to 20 percent or -- which is -- or 66 percent  
8 capacity. Am I phrasing the question correctly?

9 MR. McGEHEE: Sir, that's exactly right. And  
10 I'll ask the witness to respond to that.

11 THE COURT: Yeah. And I think that seems to  
12 me to come out of the -- his report and the -- what's  
13 going to happen as a result of these things. So I'll  
14 overrule the objections.

15 BY MR. McGEHEE:

16 Q. Did you understand the judge's question?

17 A. I...

18 Q. Could you apply it to is there any  
19 operational trigger when 66 percent capacity is reached  
20 in Addicks to trigger an emergency under the Emergency  
21 Action Plan?

22 A. I'm just trying to...

23 The Emergency Action Plan has the different  
24 levels, and there's action that's constituted based on  
25 observations of the dam itself.

1           Q.    And they're based on rate of rise and  
2    elevation?

3           A.    That's in the -- the Water Control Manual has  
4    the rate of rise and the elevation.  So it starts at a  
5    certain elevation, 101, which is below the  
6    government-owned land.  As you hit a certain elevation,  
7    you have a certain rate of rise within the Water  
8    Control Manual that falls underneath the induced  
9    surcharge regulations.

10          Q.    Okay.  And now back to the judge's question.  
11   Is there any operational trigger in the Water Control  
12   Manual that is triggered when Addicks Reservoir reaches  
13   230,000-acre-feet?

14          A.    Well, for that volume, no, it doesn't specify  
15   a volume.

16          Q.    And how about 74,000 cfs?  Is there any  
17   operational trigger in the Water Control Manual?

18          A.    If it goes back to the rate of rise, so  
19   that's where it would go back to the -- the induced  
20   surcharge, if there's a rate of rise above a certain  
21   elevation, then it would trigger underneath that which  
22   would be the standing order to the dam tender in  
23   appendix B I believe it is for the following induced  
24   surcharge.

25          Q.    Thank you.

1 MR. McGEHEE: Your Honor, that concludes my  
2 discussion on capacity. I said I would do my best to  
3 get to the overview. And if you wanted to a break, now  
4 would be good.

5 THE COURT: Okay.

6 What kind of -- I'm not familiar with the  
7 restaurants or eating places or -- what is a reasonable  
8 time for a break to get people in, out, and back in?

9 MR. McGEHEE: Judge, is 45 minutes okay?

10 THE COURT: Yeah.

11 MS. DUNCAN: How long does Your Honor like to  
12 take?

13 THE COURT: Well, it depends on what we have  
14 to do. Forty-five minutes is as much -- more than, you  
15 know, I need to eat. On the other hand, you have to  
16 also get to where you're --

17 MR. McGEHEE: Judge, an hour would be fine  
18 too.

19 THE COURT: Okay. Well, let's take an  
20 hour --

21 MR. McGEHEE: Okay.

22 THE COURT: -- to make sure that we have  
23 enough time. We'll resume then at 1:05.

24 (Off the record from 1:03 until 2:16.)

25 THE COURT: All right. Almost made it back,

1 not quite. We'll have to add another ten minutes. The  
2 food court over in the next block was -- seemed to be  
3 the closest we were able to find for food here.

4 MR. McGEHEE: Good job.

5 THE COURT: Oh, I guess there is something in  
6 there. We'll try Monday to see the cafeteria here.

7 Anyway, by the way, I saw that, Ms. Duncan,  
8 you were Judge Miller's law clerk.

9 MS. DUNCAN: Yes, sir.

10 THE COURT: I'm very privileged using his  
11 office.

12 MS. DUNCAN: Yes. I understand he is on a  
13 cruise right now.

14 THE COURT: Ah. That's a good place to be.  
15 This is almost like a cruise. But there's no one  
16 giving you a cocktail and you don't have a lot of time  
17 to eat. So other than that. It's probably better for  
18 me not to be on a cruise.

19 So anyway, let's resume, Mr. McGehee.

20 MS. DUNCAN: And, your Honor, before we get  
21 started, can we do one housekeeping matter? Does Your  
22 Honor have a sense of when you plan to end the day?  
23 And I ask so that we can try to fit in Mr. Maglio with  
24 an appropriate amount of time for his exam.

25 THE COURT: Well, if we can do that. I don't

1 have a magical time where I turn into a pumpkin or  
2 anything. I would prefer to stay as long as we need to  
3 to get a witness done and complete so they don't have  
4 to come back again. So I'm willing to stay for  
5 Mr. Maglio to get him finished today.

6 MS. DUNCAN: Okay.

7 THE COURT: And then we can each day look at  
8 the schedule when we start and see if, you know, we  
9 need to do that again or we need to cut the day shorter  
10 than we normally would because we've got all the full  
11 witnesses we can get. So let's do it very  
12 pragmatically to make sure we can put as little stress  
13 on witnesses as possible.

14 MS. DUNCAN: Yes, Your Honor. So perhaps at  
15 the next break in the proceedings we can discuss if  
16 that's a good time to then bring in Mr. Maglio.

17 THE COURT: Okay. Sounds good.

18 MR. McGEHEE: Your Honor?

19 THE COURT: Yes?

20 MR. McGEHEE: May it please the court? I've  
21 marked Exhibit 405, which I already read into the  
22 record. And I would now offer 406, Plaintiffs' 406 for  
23 demonstrative purposes. It's the chart that we wrote  
24 that is entitled "Capacity."

25 THE COURT: Okay. That chart --

1 MR. McGEHEE: Yes, sir.

2 THE COURT: -- that you're pointing to.

3 MR. McGEHEE: Yes.

4 THE COURT: Will you mark it for  
5 identification?

6 MR. McGEHEE: For identification.

7 THE COURT: What number?

8 MR. McGEHEE: We would offer it as a  
9 demonstrative.

10 THE COURT: What number is that?

11 MR. NOLEN: Plaintiffs' 406.

12 THE COURT: 406 as a demonstrative.

13 Any objection?

14 MS. DUNCAN: Not as a demonstrative.

15 THE COURT: Okay. It's admitted.

16 (Admitted Exhibit No. PX 406.)

17 BY MR. McGEHEE:

18 Q. Mr. Bardol, we've been talking about  
19 capacity, and we've talked about the maximum capacity,  
20 and we talked about how Hurricane Harvey filled up  
21 Addicks Reservoir to 66 percent of that capacity. And  
22 the word that I'd like you to define that encompasses  
23 all this capacity is spillway design flood.

24 First of all, is spillway design flood where  
25 you got this top number for 100 percent capacity?

1           A.     Yes, I can explain that. So the spillway  
2     design flood is on that table that is still being shown  
3     up here on the E2 I believe it is from the Emergency  
4     Action Plan. So that specifies, you know, the 329 as  
5     being, you know, the volume that's held behind the dam  
6     at that time.

7                 The spillway design flood is used for  
8     designing the auxillary spillways that are on each side  
9     that we talked about before that's on the north and on  
10    the west. There's the natural grade at one zero eight,  
11    108. But then the spillway design flood is used for  
12    pushing water. As the dam fills up, behind the dam  
13    within the reservoir, the water begins to flank. For  
14    the design purposes, they run that storm to be able to  
15    look at the spillways on either side, the northern one  
16    that was actually activated partially during Hurricane  
17    Harvey, and to make sure that it's safe, can safely  
18    pass the spillway design flood, which is much larger  
19    than Harvey, it was about 44 inches over about a  
20    three-day period, 72 hours. And that's where the  
21    294 cubic feet per second is coming in. You know, they  
22    go through a couple calculations I won't go through  
23    here. That's the results in that 329-acre-feet being  
24    stored with water going around the spillways up to an  
25    elevation of 115. Hurricane Harvey was at 109.



1           THE COURT: Okay. But let me maybe reduce it  
2     in my simple example. I had -- my sink in the bathroom  
3     was clogged and it wasn't -- I was filling it up and it  
4     reached the top. Now, at the top it spills over onto  
5     the floor, so you like it to reach the top. That's  
6     where you call the plumber. But is that when the  
7     spillway would take effect, once the reservoir reached  
8     that level, or is it going to work before then?

9           THE WITNESS: I -- I heard the -- the  
10    Addicks, we'll just talk about Addicks. Addicks and  
11    Barker have similar components. So there's the main  
12    spillway which are the conduits. Probably think -- use  
13    the sink example. You have the sink itself as far as,  
14    you know, you have the plunger, you open and close it.

15          THE COURT: Yes.

16          THE WITNESS: As that fills up, you close the  
17    plug. Then there's usually that overflow that's in  
18    there before it spills over on the ground. And then  
19    sizing that hole, so it goes back into the pipe so it  
20    doesn't go on the round.

21                 So the auxillary spillways, they use this  
22    design to make sure that they can take that -- the big  
23    storm, full faucet going. For here, it's that 44  
24    inches, the real big storm, to make sure it can flow  
25    through that spillway before it damages and the dam

1 would fail due to hydraulic scouring along --

2 MS. DUNCAN: Objection.

3 THE WITNESS: -- the spillways.

4 THE COURT: Yes, what's the objection?

5 MS. DUNCAN: I apologize for interrupting the  
6 witness.

7 The objection is that now this witness has  
8 started testifying as to dam failure matters, and that  
9 is beyond his expertise and it's beyond what he's been  
10 qualified for.

11 THE COURT: I think he was qualified for how  
12 the emergency plan works. I was asking the question in  
13 part just to give me a conceptual view, not necessarily  
14 the numbers. But at some point -- going back to using  
15 my sink, my sink goes up to the top and there's a  
16 little hole on one side of it that goes down into the  
17 drain through a different way.

18 THE WITNESS: Yes.

19 THE COURT: Once it reaches full, the hole  
20 doesn't quite take all the water out. So it still  
21 continues to get near overflowing, though the hole is  
22 probably mitigating that. The spillways, this is  
23 conceptually --

24 THE WITNESS: Yeah.

25 THE COURT: -- do that before the reservoir

1 was to overflow.

2 THE WITNESS: Yes, correct. A good analogy  
3 is the top -- the high point of the dam is at 121, so  
4 that would be like the lip of your sink.

5 THE COURT: Yeah.

6 THE WITNESS: The spillway starts off at 108,  
7 then it continues on up to 115. So that spillway is  
8 designed to handle that flow.

9 And as far as on the failure side, on the dam  
10 there is going to be two components: geotechnical and  
11 the hydraulic component. I'll look at the hydraulic  
12 component to make sure those components can safely  
13 pass, you know, the spillway design flood or whatever  
14 design flood that's there. So hydraulically they can  
15 function to pass that. And that's what was done here  
16 with the spillway design flood, to make sure the  
17 auxillary spillways on the north and on the west were  
18 designed appropriately to be able to pass those storm  
19 events.

20 THE COURT: And are the spillways opened or  
21 closed manually or is it -- they just --

22 THE WITNESS: Oh, good --

23 THE COURT: -- gravity does --

24 THE WITNESS: -- question.

25 THE COURT: -- the work?

1           THE WITNESS: Yeah, these are just open, so  
2   it's -- there's the main gate structure at the dam that  
3   is the five conduits with gates. The spillways, the  
4   auxillary spillways, they're roller-compacted concrete.  
5   So they're concreted in. That was done in the '80s up  
6   into the '90s where they were -- so it's just overland  
7   flow path. So when you hear flanking flows where water  
8   went around the north, that's actually through the  
9   designed spillway to be able to handle that flow. So  
10   they're open structure. There's no gates. It's just  
11   roller-compacted concrete over the earth for that part  
12   of the dam.

13           THE COURT: So just when it gets to a certain  
14   level, the 108 level --

15           THE WITNESS: Yes.

16           THE COURT: -- the water starts pouring into  
17   the spillways.

18           THE WITNESS: It -- correct, it flanks  
19   around, it goes over the spillway, and then that's  
20   concreted all the way up to, you know, 111.5, and goes  
21   up even higher up to the 115 for the auxillary  
22   spillways. And there are a few -- they're several  
23   thousand feet long, so they're very large.

24           THE COURT: Okay. Thank you very much.

25           THE WITNESS: Yes.

1 BY MR. MCGEHEE:

2 Q. And following up on that, if the judge's sink  
3 fills up to spillway design flood, does his sink spill  
4 out onto the floor?

5 A. If we're taking the top of the sink as being  
6 the 121, the top of the dam, no. It would be going  
7 through that -- the spillway, what I'm kind of equating  
8 to that hole that you designed for that to --

9 Q. The second question, will his sink break at  
10 spillway design flood?

11 A. It would not.

12 Q. Okay. And this is Addicks. Addicks has  
13 66 percent capacity for acre-feet and 20 percent  
14 capacity for inflow. Compare those to Barker.

15 A. Yeah, if I can pull up the...

16 Q. And we don't need specific numbers.

17 A. Okay.

18 Q. But just is Barker higher or lower?

19 A. Yeah. So, you know, Barker -- I'm just going  
20 to pull up the elevation here.

21 Spillway design flood was up to 108. I just  
22 want to make sure I get the right elevation to what it  
23 filled up to for Harvey. And this is in my report.  
24 I'll reference the table when I get to it.

25 So I'm looking at page 6-39 of my report,

1 table 6-1. I'm just going to reference what was the  
2 top for Barker. So during the -- the gate's open, so  
3 this was during the Harvey event, it filled up to  
4 101.5, 101.6, just above 101. And when we look at this  
5 chart right here, going up to 101, that's below the  
6 natural ground at the end, so it never activated the  
7 spillway. So Barker Reservoir filled up, and it never  
8 flanked around the side. The auxillary spillways were  
9 never activated. It only went through the primary gate  
10 structure at the end, the conduit pipes.

11 Q. Okay. Thank you.

12 And the acre-feet at Hurricane Harvey for  
13 Barker was 173,000, approximately?

14 MS. DUNCAN: Objection. Mr. McGehee is  
15 leading the witness.

16 THE COURT: Well, I don't think there's --  
17 that's where answer is not being suggested. I'll allow  
18 it. Maybe he's speeding it up a little bit.

19 THE WITNESS: I mean, I can look at my report  
20 and pull up the number from here. When I look on here,  
21 it's, you know, between 133 to 209, so it's the number  
22 you said there, about the 170. I can pull up the  
23 number here if you want me to reference the exact  
24 number.

25 Do you want me to pull up the number out of

1 my report for the --

2 BY MR. McGEHEE:

3 Q. We just want to get a relative capacity  
4 comparison.

5 A. It...

6 Q. For Barker.

7 A. Yeah, it was -- let's see. I mean, it was  
8 below the -- when you compare it to the spillway design  
9 flood, which is the ultimate, it's -- you know, it's  
10 around 50 percent, you know, just over 50 percent of  
11 the spillway design flood elevation.

12 Q. So the capacity from Hurricane Harvey in  
13 Barker was less than the capacity for Hurricane Harvey  
14 in Addicks?

15 A. Actually, I'd probably flip it around. There  
16 was more capacity that was even --

17 Q. I said --

18 A. -- available --

19 Q. -- it backwards.

20 A. -- yeah. Yeah, so less capacity was used.  
21 There was more capacity that was actually available.

22 Q. Thank you.

23 A. Yes.

24 Q. Thank you.

25 Just before we get into this next subject, to

1     avoid an objection, there was an objection that your  
2     report didn't talk about emergencies. Tell the court  
3     the title of paragraph 2.6 in your report.

4             A.     Yes, sir.

5             Q.     Just the title.

6             A.     2.6, the title is "There was no emergency.  
7     The reservoirs performed as expected by the U.S. Army  
8     Corps of Engineers."

9             Q.     Okay. Now I'd like to talk about the reason  
10     for opening the gates. I'd like to talk --

11            A.     Yes.

12            Q.     I'd like to talk about the reason for opening  
13     the gates. And then next we're going to talk about  
14     whether that reason had anything to do with emergency.  
15     But let's first talk about the reason for opening the  
16     gates.

17            A.     Yes.

18            Q.     The sole reason for opening the gates was --  
19     and before you answer, I'd like to present to you what  
20     the defense is on those reasons and show you  
21     three minutes' worth of clips what the defense says the  
22     reason is and then have you comment on those clips.

23            A.     Yes.

24                    MS. DUNCAN: Objection. Your Honor, he is  
25     putting forth information and then asking the court to



1 comment -- I mean the witness to comment on it. That's  
2 improper on multiple bases. First we have a 702  
3 problem. This is not an undisclosed -- sorry, this is  
4 an undisclosed expert opinion, and it has to be based  
5 on scientific, technical or specialized knowledge, not  
6 simply commenting on fact information. There's no  
7 methodology to this.

8 We also have a 703 problem. Sure an expert  
9 can rely on hearsay, but that doesn't mean that that  
10 hearsay is then admissible. Plaintiffs are trying to  
11 get around that by formulating deposition testimony as  
12 a question? That's improper as well. He can ask a  
13 question directly. But otherwise, what he's proposing  
14 today here is improper under 702 and 703.

15 MR. McGEHEE: Your Honor, regarding hearsay,  
16 it's not hearsay. It's a statement by a party  
17 opponent. They're not surprised. We sent them over  
18 our clips on Tuesday.

19 THE COURT: Yes.

20 MR. McGEHEE: They were present during the  
21 depositions. They had firsthand -- and we're asking  
22 the expert to comment on their defenses. This is the  
23 most expedient way to do it. If we wait and let the  
24 expert listen to all of the defenses and call him in as  
25 a rebuttal witness, that's going to waste lots of court

1 time.

2 THE COURT: I'll overrule the objection.

3 MS. DUNCAN: Your Honor, may I lodge one more  
4 objection for the record? This is a rebuttal set of  
5 questions. Mr. Bardol did not prepare a rebuttal  
6 report, and this sort of information is nowhere in his  
7 expert report, except for Mr. Thomas. He is the only  
8 one in here. All these other witnesses they put in  
9 these clips are simply not in the report. They've not  
10 been disclosed. We haven't been able to depose  
11 Mr. Bardol about his reliance on them.

12 THE COURT: These were for -- most of the  
13 quotes were deposition quotes, so they were being  
14 deposed when the depositions were made, presumably.  
15 And he's being asked about that now, so it seems to me  
16 an appropriate question.

17 MR. McGEHEE: Play clip 4.

18 (Video played.)

19 "There was an intentional -- there was an  
20 induced surcharge which included intentionally  
21 delivering extra water to this area on the Buffalo  
22 Bayou.

23 "Objection. Form. Vague. Is that a  
24 question, counsel?

25 "There was an intentional release of water

1 down Buffalo Bayou, yes.

2 "By the book?

3 "By the book.

4 "Object to form. Vague.

5 "And that book is the same book that closed  
6 the gates?

7 "Objection. Form. Vague.

8 "Yes.

9 "Tell the judge what the Water Control Manual  
10 is.

11 "The Water Control Manual is the document  
12 that is used to govern water control decisions.

13 "If we fed -- go with me on this. If we had  
14 a computer that y'all created and we fed the Water  
15 Control Manual into that computer and so that the only  
16 decisions that were made during Hurricane Harvey came  
17 out of that computer and the computer was following the  
18 Water Control Manual. Are you with me in my  
19 hypothetical?

20 "I think so.

21 "Would the computer have made any different  
22 decisions than you made?

23 "Well, it's a very subjective and obviously a  
24 hypothetical question, so difficult for me to answer  
25 what a computer would do versus what the humans did or

1 would do given the models and the Water Control Manual.

2 "And I'm saying if you fed the Water Control  
3 Manual and all your models into the computer, would the  
4 computer have made a different decision than you made?

5 "Object to the form of the question.

6 "Based off of this hypothetical, I do not  
7 believe that a computer receiving the input that you  
8 described would have made a different decision.

9 "I agree with that. Thanks for your answer.

10 "But for today, it's your testimony that the  
11 decision to open the gates was done by the book  
12 according to the Water Control Manual?

13 "Objection. Form. Mischaracterizes prior  
14 testimony.

15 "That was done by the book following the dam  
16 safety protocols as well as the Water Control Manual.

17 "And I think you may have already answered  
18 it, but are you saying -- and it's not a trick question  
19 because Mr. Thomas and many others have answered this  
20 already. But is it your understanding during Harvey  
21 that the corps operated Addicks and Barker consistent  
22 with the Water Control Manual's directives and that  
23 deviation you just referenced?

24 "Objection. Form. Compound question. Calls  
25 for speculation.

1                    "In my opinion, we followed the Water Control  
2     Manual to the letter.

3                    "And the reason the gates were opened was  
4     because of these induced surcharge regulations as  
5     prescribed and set forth in the Water Control Manual,  
6     right?

7                    "That's right.

8                    "Was there any other reason?

9                    "No, sir.

10                   (Video stopped.)

11     BY MR. McGEHEE:

12                   Q.     Based on what you just heard, was emergency a  
13     reason for opening the gates?

14                   A.     No.     They were following the Water Control  
15     Manual.

16                   Q.     Based on what you just heard, was imminent  
17     danger a reason for opening the gates?

18                   A.     No, it was not.

19                   Q.     I'm going to use the judge's term.     Describe  
20     the single document that lists the ordinary operating  
21     procedure for when the gates are to be opened absent an  
22     emergency.

23                   A.     Yes.     The Water Control Manual outlines the  
24     ordinary operating procedures for the dam tender for  
25     opening and closing the gates.     That's included in the

1 Water Control Manual.

2 Q. And could you point -- we're going to pull it  
3 up here in a second.

4 A. Yes.

5 Q. But my question will be, can you point to the  
6 Water Control Manual, what triggered the corps to open  
7 the gates based on the Water Control Manual?

8 A. Yeah. So this -- what we're looking at is  
9 one of the plates at the back. If you slide it up  
10 slightly, I can just reference the plate number. Yeah,  
11 it's plate 703, induced surcharge. This is for  
12 Addicks. And how this would be read is on the very  
13 left-hand side, the vertical axis, what the dam tender  
14 would be who is operating it would look at what  
15 elevation. So there's two elements that would go into  
16 it. It would be first elevation and then the rate of  
17 rise, how fast the water is filling up within the  
18 reservoir upstream, just upstream of the dam.

19 So on the left-hand side, if you went to like  
20 a 104, if the water filled up to that, that doesn't  
21 automatically cause the gates to be opened or operated  
22 differently. You have to look at rate of rise, and  
23 those are those curved lines going across. So if  
24 underneath here you're at a 104 and the rate of rise  
25 is, you know, .36, you would slide over to that. And

1 then once you hit that line, you'd follow that black  
2 line up to the top. It's kind of hard to see here. I  
3 think that's a 2.5 foot. So then the dam tender would  
4 open up the gates 2.5 feet. So this is the induced  
5 surcharge with a manual that would be followed based on  
6 the elevation that's in the reservoir upstream of the  
7 dam and then sliding over to the rate of rise, how fast  
8 it is filling up.

9 Q. When the corps employee said "by the book,"  
10 is that the book he was referring to?

11 A. This is the book, the Water Control Manual,  
12 yes, sir.

13 Q. And I can't -- I can't see very well at all.

14 MR. McGEHEE: If I could approach?

15 THE COURT: Sure.

16 BY MR. McGEHEE:

17 Q. Right here, it says "induce surcharge  
18 operating schedule." Anywhere in there does it say  
19 "emergency"?

20 A. For this and within the manual where these  
21 fall under, no, it does not use the word "emergency."

22 Q. Based on what the corps employee said and  
23 what's in the ordinary operating procedure, was there  
24 any other reason that has been testified to or you  
25 reviewed in your documents? So is there any other

1 reason to open the gates?

2 A. Other than following the water control manual  
3 to -- by the book, as he said, no, there's no other  
4 reason that I've seen.

5 Q. Before I ask whether or not there was, in  
6 fact, an emergency -- and we're going back now to the  
7 judge's question, whether an emergency necessitated.  
8 Before I ask whether or not there was, in fact, an  
9 emergency, whether it was declared or assumed or  
10 informal, I'd like to see -- I'd like you to listen to  
11 what the corps officials said about that subject, and  
12 then I'm going to ask your opinion.

13 MR. McGEHEE: Please play clip number 1.

14 MS. DUNCAN: Your Honor, we'd like to renew  
15 our objection. We believe this is improper testimony  
16 that the plaintiffs are trying to backdoor in. He is  
17 not qualified to speak on this Emergency Action Plan as  
18 to whether there was an actual emergency. That's a  
19 fact question. He hasn't described any methodology  
20 other than simply looking at testimony. Well, you're  
21 the one who looks at testimony, Your Honor. You're the  
22 one who decides questions of fact. And so plaintiffs  
23 are trying to backdoor in this inadmissible, unadmitted  
24 deposition testimony through their expert on what is  
25 simply a fact question.



1 THE COURT: Okay. I'll overrule the  
2 objection but allow you to have a sustaining continuing  
3 objection to that issue.

4 (Video played.)

5 "You know what the Emergency Action Plan is?

6 "Yes.

7 "You know it's -- you've got to follow the  
8 Emergency Action Plan to the T, correct?

9 "You need to follow the Emergency Action  
10 Plan, yes.

11 "At no time during Hurricane Harvey was  
12 Hurricane Harvey declared an emergency by the Corps of  
13 Engineers, true?

14 "Could you restate that question, please?

15 "At no time did you designate this as an  
16 emergency?

17 "Objection. Form. Calls for speculation.

18 "At no time to my knowledge did conditions  
19 exist that would have required us to exercise the  
20 emergency operation plan.

21 "And since the conditions didn't exist, you  
22 didn't declare an emergency, did you?

23 "Objection. Form. Calls for speculation.

24 "Not to my knowledge.

25 "Okay. And there's a -- and I'm going to

1 hand you that. That's the corps' Emergency Action  
2 Plan, isn't it?

3 "Yes, sir.

4 "And that's what you're referring to as never  
5 being invoked in Harvey?

6 "Yes, sir.

7 "Okay. Now with respect to Addicks and  
8 Barker, they were not under emergency operations; is  
9 that correct?

10 "I'll object to the form of the question as  
11 vague.

12 "As of August 22nd, 2017, Addicks and Barker  
13 were not under any sort of Emergency Action Plan or  
14 emergency operations, right?

15 "I -- no, they were not.

16 "And so if Addicks Barker were ever operating  
17 under the EAP, that would have been something that  
18 Mr. Thomas would have decided or determined?

19 "We would have determined that together, sir.

20 "Okay. And to your knowledge, did that ever  
21 occur?

22 "No, sir.

23 "Has there ever been a formal declaration of  
24 a level two emergency in the history of the Addicks and  
25 Barker Dams and Reservoirs?

1 "Not that I know of, sir.

2 "Has there ever been a formal declaration of  
3 level one emergency?

4 "Not that I know of, sir.

5 "Has there ever been a formal declaration of  
6 level three emergency?

7 "Not that I know of, sir."

8 (Video stopped.)

9 BY MR. McGEHEE:

10 Q. Based on those responses, your training,  
11 skill, and experience, and what you've reviewed in this  
12 case, I'd ask you the judge's question. Did emergency  
13 necessitate opening the gates?

14 A. From what I've seen, no. They were following  
15 the Water Control Manual based on the elevation and  
16 rate of rise. It was not based on emergency  
17 observations out in the field.

18 Q. And how does that fit with the ordinary  
19 operating procedure?

20 A. They were following the ordinary operating  
21 procedures based on an elevation rate of rise to open  
22 the gates underneath the induced surcharge.

23 Q. Did you review the memo for the commander and  
24 the report of performance?

25 A. I did, yes.

1 Q. So I have a hard time, I can read my version.

2 Can you read your version?

3 A. With my glasses off, then I can, yes.

4 Q. You can't do it either?

5 A. No, I can. Yes.

6 Q. Okay. Could you please read from the  
7 memorandum for the commander written by Robert Thomas  
8 the highlighted portions of number 2?

9 A. Yes, sir.

10 "The embankment, outlet structures, and  
11 emergency spillways functioned as intended.  
12 Piezometers, settlement pins, and alignment surveys for  
13 the outlet structures do not show any alarming trends  
14 from this pool of record. No observations of seepage,  
15 critical distress areas located on the dams -- or  
16 critical distress areas located on the dams. Overall  
17 conclusion is that the project was performing as  
18 expected with no significant problems during this pool  
19 of record."

20 Q. Could you read the report of performance, the  
21 highlighted portion on the page that H.C. is going to  
22 put up here? There you go.

23 A. Okay. Great.

24 "In general, both dams functioned as expected  
25 throughout the flooding event and no critical issues

1     were observed that would impact the future performance  
2     of the dams. Release from the reservoir were made  
3     following the Water Control Manual, WCM, November --  
4     dated November 2012, induced surcharge regulated  
5     releases."

6             Q.     And read - I think this is one of the last  
7     ones - the next page, just the highlighted portion.

8             A.     Yes.

9                     "In general, the observation teams did not  
10    find any critical issues that could impact the proper  
11    performance of the dams. There were no critical  
12    findings observed during this Stage 2 extended watch  
13    for both Addicks and Barker dams."

14            Q.     And then we have a section that refers to our  
15    capacity chart here in that same document. Would you  
16    read the highlighted portion that's called "Emergency  
17    Spillway Performance," the highlighted portion.

18            A.     Yes.

19                    "The full capacity of the emergency spillways  
20    was not reached. No issues were observed with  
21    emergency spillways. The emergency spillways of the  
22    south end of the Addicks Dam and both the Barker Dam  
23    did not see any flows."

24            Q.     One last paragraph. Just the highlighted is  
25    fine.

1           A.    The top is "Piezometer measurements, no  
2   critical issues were observed."

3           Q.    Mr. Bardol, based on the training you had in  
4   emergencies, based on your writing and editing and  
5   reviewing emergency action plans, after-action reports,  
6   and all your training, skill, and experience, should a  
7   memorandum for the commander and a report of  
8   performance that's written a month or so after the  
9   event, should it be truthful?

10          A.    Yes, it should be.

11          Q.    Should it be completed?

12          A.    Yes, it should be.

13          Q.    Should it be helpful for future events?

14          A.    Yes.

15          Q.    Could future -- could future lives depend on  
16   the accuracy?

17          A.    Yes, it would.

18          Q.    Describe where in these documents that we  
19   just read, describe where they discussed that emergency  
20   necessitated opening the gates.

21          A.    These documents do not show that.

22          Q.    Describe in these documents written shortly  
23   after the event that they discuss imminent danger  
24   necessitated opening the gates.

25          A.    They do not.

1 Q. Describe where it says the Water Control  
2 Manual was not followed.

3 A. It does not say that.

4 Q. Describe where it says the ordinary operating  
5 procedure was not followed.

6 A. It does not say that.

7 Q. Describe whether a declaration of emergency  
8 ever appears in these documents.

9 A. I do not see that.

10 Q. Describe whether a declaration of emergency  
11 was ever communicated to Houston, Fort Bend County,  
12 Harris County Flood Control, or the 7.5 million  
13 residents of the Houston area.

14 A. I did not see that.

15 MS. DUNCAN: Objection. Your Honor, we're  
16 well beyond the foundation of Mr. Bardol's expert  
17 report. He doesn't describe doing such an analysis and  
18 it certainly isn't in his report.

19 THE COURT: Well, I guess it's within the  
20 context of this report, the question.

21 Is that right, Mr. McGehee?

22 MR. McGEHEE: Yes, sir.

23 THE COURT: I assume. Within the context of  
24 this document then, I'll overrule the objection.

25

1 BY MR. MCGEHEE:

2 Q. I'm going to talk about the Emergency Action  
3 Plan, times when an emergency exists.

4 A. Yes.

5 Q. And even though I think it's obvious our  
6 position an emergency did not exist, let's go to the  
7 Emergency Action Plan and see whether the conditions  
8 were met that satisfy an emergency under the Emergency  
9 Action Plan.

10 First of all, do you recall Mr. Long saying  
11 that those conditions did not exist?

12 A. Yes, I do recall that.

13 Q. Okay. Let's look at the Emergency Action  
14 Plan. Page 15 of the Emergency Action Plan, it lists  
15 the Level 1 emergency, Level 2 emergency, and Level 3  
16 emergency.

17 Do you see that?

18 A. I do, yes.

19 Q. Were those conditions for Level 1 emergency  
20 ever met?

21 A. From what I saw, no.

22 Q. Were the conditions for a Level 2 emergency  
23 ever met?

24 A. No.

25 Q. Were the conditions for a Level 3 emergency,



1     which -- it says "Level 3 Emergency - Evacuation."

2     Were those conditions ever met?

3           A.     Following from this page, no, they were not  
4     met.

5           Q.     There's a section where there's a procedure  
6     for opening the gates and doing other things under the  
7     Emergency Action Plan.  When you look at the procedure  
8     on page C-13, it says "Emergency Level 1 or 2,  
9     Condition 1" and "Condition 2."

10           Do you see those?

11           A.     I do.

12           Q.     And you've reviewed those?

13           A.     I have, yes.

14           Q.     Were those conditions met?

15           A.     These conditions were not met, no.

16           Q.     Do you see how the gates are supposed to be  
17     opened during an emergency?

18           A.     Yes, on this page.  And I think the following  
19     page, there's another table.

20           Q.     Is that how they opened the gates, according  
21     to this emergency, during Hurricane Harvey or did they  
22     follow the procedure in the Water Control Manual?

23           A.     They followed the procedures in the Water  
24     Control Manual.

25           Q.     And did a dam safety officer ever declare

1 when the termination of the emergency occurred?

2 A. I did not see one, no.

3 Q. Would you agree that every, every emergency,  
4 a hundred percent every single emergency should be  
5 declared?

6 A. That's correct, yes.

7 Q. Would you agree that no emergency ever under  
8 the sun should be informal or secret?

9 MS. DUNCAN: Objection. Leading.  
10 Argumentative.

11 THE COURT: It is leading.

12 MR. McGEHEE: It is, Your Honor.

13 BY MR. McGEHEE:

14 Q. How appropriate would it be for --

15 THE COURT: Sustained.

16 MR. McGEHEE: -- the corps to say they  
17 invoked an informal emergency?

18 THE WITNESS: Within the Emergency Action  
19 Plan and standard procedures, emergency is declared.  
20 So there's a defining point when someone in control and  
21 in command would declare an emergency, then enact the  
22 actions.

23 BY MR. McGEHEE:

24 Q. I'd like to talk about informal emergency,  
25 and I'd like to ask you the propriety of even having an

1 informal emergency. And I'd like you to listen to what  
2 the corps officials said about that, and then I'm going  
3 to ask your opinion about it.

4 MR. McGEHEE: Please play clip 2.

5 MS. DUNCAN: Objection. We renew our prior  
6 objection about playing deposition testimony, and then  
7 we also object to the relevance of propriety. It's  
8 really not relevant whether this witness thinks it's  
9 proper. Again, all this goes back to a fact question  
10 as to whether the EAP was invoked. It doesn't require  
11 an expert looking at deposition testimony and reaching  
12 a purported opinion on it.

13 THE COURT: Well, the propriety I agree with.  
14 The rest of the question is okay. So I'll allow the  
15 question minus the propriety.

16 MR. McGEHEE: And I'll withdraw the propriety  
17 question.

18 Play clip 2.

19 (Video played.)

20 "So looking back at Exhibit 25, which is the  
21 report of performance for Addicks and Barker Dams for  
22 this new pool of record, I don't find any discussion of  
23 Emergency Level 2 being activated in this document. Is  
24 that because it was only an informal declaration?

25 "No, sir. It's because there was no threat

1 of immediate dam failure.

2 "Does the Emergency Action Plan prescribe  
3 having an informal level two emergency designation?

4 "I don't believe so, sir.

5 "You don't believe so?

6 "I don't believe, sir.

7 "I heard the word 'informal emergency,' and I  
8 almost laughed because it sounds to me like an  
9 oxymoron. Do you know an oxymoron is when two words  
10 seem to contradict each other?

11 "Objection to form. Compound question.

12 "You know that's the definition of oxymoron?

13 "Yes, sir.

14 "Nowhere in the Emergency Action Plan are the  
15 words 'informal emergency' used, correct?

16 "Objection. Form. Lack of foundation.

17 "I do not know the document word for word, so  
18 I couldn't say if it's in there or not.

19 "You know that it's not protocol to have  
20 informal emergency action plans, correct?

21 "Objection. Form. Lack of foundation.

22 "Yes, sir.

23 "And I'll be straight with you, Mr. Long. I  
24 think the word 'informal emergency' came up in  
25 preparation for this lawsuit. So my question is this:

1 Have you ever seen those words written in any document  
2 ever in the history of the world ever published by the  
3 Corps of Engineers? Have you ever seen the words  
4 'informal emergency'?

5 "Objection. Form. Compound question.

6 "Not that I recall."

7 (Video stopped.)

8 THE COURT: I've seen the word "informal  
9 emergency" used with my three-year-old grandson. It  
10 happens all the time. He wants to do something and  
11 grandpa, good nature to say, "Oh, yeah." And then  
12 realizes, no, his mother and dad aren't going to like  
13 that.

14 MR. McGEHEE: So I'm going to modify my  
15 script.

16 BY MR. McGEHEE:

17 Q. Mr. Bardol, I'm not going to ask you  
18 propriety.

19 What documents indicate, if any, of all of  
20 the things that you've reviewed that an informal  
21 emergency was ever communicated in writing to the  
22 Harris County Flood Control District, to Fort Bend, to  
23 the City of Houston, or to the 7.5 million residents of  
24 the Houston area?

25 A. I have --

1 MS. DUNCAN: Objection, Your Honor. This is  
2 not a matter that was analyzed in his report or  
3 disclosed as an opinion. It's beyond the scope and  
4 improper under Rule 26.

5 THE COURT: Yeah, I think I'd agree with  
6 that. I'll sustain the objection.

7 BY MR. McGEHEE:

8 Q. What corps documents have you reviewed that  
9 ever used the word "informal emergency"?

10 A. Corps documents or even just other documents  
11 for dam safety, Emergency Action Plans, including the  
12 Corps of Engineers for the Federal Emergency Regulatory  
13 Commission or the energy commission that -- for  
14 hydroelectric facilities, it's always declared  
15 emergency when it goes into Emergency Action Plan. It  
16 would not be informal. Once it goes into Emergency  
17 Action Plan, there's a formal notification process.  
18 Notification tree, I did that in the Air Force. But  
19 also through Emergency Action Plans, you end up having  
20 declare an emergency. That enacts, you know, usually a  
21 flow chat of who is notified when. There's usually  
22 written communication that goes out as far as specific  
23 sound bites of what the emergency is, what the action  
24 would be. So it's usually a very formal process.

25 Q. Let's talk about paragraph 8.5 of your

1 report.

2 MR. McGEHEE: And, Your Honor, I said I would  
3 notify you where I get to convenient stopping points.  
4 Here is one. There's another one in 15, 20 minutes.  
5 And I am just alerting the court.

6 THE COURT: Okay. Well, how much time are  
7 you going to need for Mr. Maglio?

8 MS. DUNCAN: I think between the parties,  
9 we've estimated approximately an hour and a half.

10 THE COURT: So why don't we go for 20 minutes  
11 here, and then we can stop and then bring on  
12 Mr. Maglio.

13 MR. McGEHEE: Thank you, sir.

14 BY MR. McGEHEE:

15 Q. Page 8.5 of your report. And I want to talk  
16 about dam failure and dam safety. And before I do, I'd  
17 like you to listen to what the corps officials said  
18 about dam failure and safety as a reason for the  
19 induced surcharges.

20 Please play clip number 3.

21 MS. DUNCAN: Objection. Before we go there,  
22 Your Honor, this witness is not a geotechnical expert.  
23 He can't speak to the stability of the dam for the  
24 likelihood of failure. He never analyzed that in this  
25 report and it's, again, beyond the scope of his

1 expertise. Part of this report was authored by a  
2 geotechnical expert that the plaintiffs have chose to  
3 not put on the stand. So Mr. Bardol can't sit here and  
4 cover geotechnical or dam integrity related topics.

5 MR. McGEHEE: Judge, it's his report. He can  
6 rely on other people in Geosyntec. It even occupies  
7 its own chapter, Chapter 8.56, for dam failure and dam  
8 safety.

9 THE COURT: Okay. I'll allow it with the  
10 understanding that if he goes beyond the report, he's  
11 not a geotechnical expert, but he does have the ability  
12 to use that as an expert witness. Okay.

13 MR. McGEHEE: Clip 3.

14 (Video played.)

15 "In this case there was no issue involving  
16 integrity of the dam, true?

17 "Objection. Form. Calls for speculation.

18 "Not to my knowledge.

19 "Dam performed as expected?

20 "Objection. Form. Vague.

21 "To my knowledge, yes, sir.

22 "You were proud of how the dam performed?

23 "Yes.

24 "And I think we established in your first two  
25 days of deposition that there was never a point where



1 the Army Corps believed that the reservoirs were about  
2 to fail. True, sir?

3 "True.

4 "So your observers and your piezometers  
5 weren't giving you data saying we're about to have  
6 imminent failure, right?

7 "That's right, sir.

8 "And, in fact, you made comments and people  
9 with the corps made comments that erroneous reports  
10 that there had been failures where inaccurate, right?

11 "That's right, sir.

12 "And this point here, controlled releases  
13 from the dams are required to mitigate risk to the  
14 structure, there was no structure failure, correct?

15 "That is correct.

16 "To either Addicks or Barker?

17 "No, sir.

18 "Was there ever a determination made that  
19 either Addicks or Barker would fail?

20 "Not to my recollection.

21 (Video stopped.)

22 BY MR. McGEHEE:

23 Q. Let's talk about dam safety as a reason for  
24 the induced surcharge. And describe in your opinion  
25 whether or not dam safety a long, long time ago during

1 the reign of the 1962 Water Control Manual, which had a  
2 different name, do you think dam safety in the 1962  
3 Water Control Manual wasn't a reason why induced  
4 surcharges were used?

5 A. Yes, I'll talk to that. So as far as on the  
6 1962, the -- it's kind of hard to see there, but the  
7 Reservoir Regulation Manual, when this was enacted or  
8 was in place, the auxillary spillways I talked about  
9 before, Judge, you know, they were not reinforced, they  
10 were not roller-compacted concrete. They were just  
11 bare earth. So if there was flanking flows, there  
12 would be a risk at that time for the hydraulic scouring  
13 and failure of the dam through the hydraulic forces.

14 And just as on the component here of -- you  
15 know, I do work with a lot of geotech engineers. I am  
16 not. But usually with the dam itself, I always joke  
17 with them, you know, a dam but for the water is really  
18 not a dam. You really need water up there. So it's  
19 always the geotech and the water sources engineer that  
20 are working together.

21 So underneath this, you know, underneath  
22 1962, there was a concern of dam failure based by  
23 flanking, use the auxillary spillways. Actually back  
24 then I think they were called "emergency spillways."  
25 That was changed after they were, you know, reinforced

1     because by them being enacted, it's just ordinary  
2     operating underneath that that they can flank and they  
3     wouldn't fail. So back then, there was a risk due to  
4     failure due to scouring up there. But after they  
5     were --

6                   THE COURT: What did the risk cause, you  
7     said?

8                   THE WITNESS: When the 1962 manual was in  
9     place, prior to the 1980s when they were -- the  
10    auxillary spillways were paved, if the water would flow  
11    around and flank up there, it could cause a dam failure  
12    because you would have scouring and it would scour the  
13    earth, and that's a hydraulic, not a geotechnical  
14    element, but it would scour where the spillway would  
15    be.

16                  THE COURT: Okay.

17    BY MR. McGEHEE:

18                  Q. And if you can --

19                  MR. McGEHEE: I'm sorry, Judge. Are you...

20                  THE COURT: Yeah, that answers my...

21    BY MR. McGEHEE:

22                  Q. In the old manual, in the 1962 manual, where  
23    dam safety may have been a reason for -- they didn't  
24    call them induced surcharges, but opening the gates,  
25    what's the topic title that describes when the gates

1 should be open? Read the topic title for number 30.

2 A. 30 was Emergency Regulation.

3 Q. Emergency Regulation.

4 And that topic title is different from  
5 today's Water Control Manual, correct?

6 A. It is, correct, yes. They removed the word  
7 "emergency."

8 Q. And let's look at the chart on the next page  
9 that describes the criteria that you described before,  
10 the elevation and the rate of rise for when the gates  
11 are supposed to be open. First of all, tell us what's  
12 highlighted. What is this table called?

13 A. This is emergency operating schedule, plate  
14 22.

15 Q. And as we pointed out before in the current  
16 Water Control Manual, those words don't appear. It  
17 doesn't say "emergency," does it?

18 A. It does not.

19 Q. And what does this panel say compared to the  
20 2012 manual? What does this panel say when to open the  
21 gates? About the same?

22 A. It's similar here. They have the elevation  
23 on the left, so the reservoir elevation. Then they  
24 have the rate of rise in decimal feet for the inflow.  
25 And just as similar, you go from the elevation, follow

1     that graph to the right where you get the rate of rise.  
2     And then from that, you can figure out how much to open  
3     up the five conduits in order -- in measurement of  
4     feet.

5           Q.     And we talked about what might have happened  
6     between 1962 and 2012 to remove dam safety as a reason  
7     for the induced surcharge. And I want to turn your  
8     attention to the dam safety modification report. Are  
9     you familiar with that, sir?

10          A.     I am, yes.

11          Q.     And you've read that?

12          A.     I have, yes.

13          Q.     I'd like to put up JX 042 on the board. And  
14     I think you generally described the improvements that  
15     might be a reason why dam safety is no longer an issue.  
16     Just briefly read the highlighted portions of the dam  
17     safety modification report that's highlighted on  
18     page -- on paragraph 2.6.10.

19          A.     Yes. The title is "Armoring Ends of Dams,  
20     Addicks and Barker Dams." Roller-compacted concrete,  
21     which is RCC -- just the highlighted, correct?

22                MS. DUNCAN: And, Your Honor, may I get a  
23     page number?

24                MR. McGEHEE: Yes. USACE066071.

25                MS. DUNCAN: Got it. Thank you.

1 MR. McGEHEE: Okay.

2 BY MR. McGEHEE:

3 Q. Go ahead, sir.

4 A. Just read the highlighted portions or --

5 Q. Yes, sir.

6 A. Okay.

7 Q. Yes, sir.

8 A. So it starts off with the armoring ends of  
9 the dams, Addicks and Barker Dams. It talks about the  
10 roller-compacted concrete, the RCC I mentioned before,  
11 was placed in lengths of 10,550, and then the  
12 8,489 feet along the dams, and then also lengths of  
13 11,631 and 2,990 feet were the lengths that it was  
14 placed. The armoring consist of eight-inch plate --  
15 eight-inch in-place thickness of roller-compacted  
16 concrete. The RCC was placed over the crown and  
17 downstream slope of the outflow embankment and extends  
18 ten feet longitudinally. An apron varying in width  
19 from 10 to 15 feet, protection in the tailwater area.  
20 Additionally, the apron at the toe of the embankment  
21 was extended for lengths of 30 feet. To assure that  
22 the erosion will not occur past the transition between  
23 the overflow and the main embankment sections of the  
24 dam, the roller -- oh, I'm sorry, that's not  
25 highlighted. A steel pile cutoff wall was driven

1 across the dam embankment.

2 Q. How does that support your opinion that the  
3 dam safety reason in the 1962 manual no longer exists  
4 in the 2012 manual?

5 MS. DUNCAN: Objection, Your Honor. We're  
6 now well beyond his report again. He doesn't analyze  
7 the '62 manual anywhere in his report, nor does the  
8 geotechnical portion analyze this level of detail. And  
9 they certainly -- the report certainly doesn't  
10 characterize the '62 manual and this armoring for dam  
11 safety.

12 MR. McGEHEE: And if I could just ask a  
13 predicate question.

14 BY MR. McGEHEE:

15 Q. Does your report discuss dam safety?

16 A. It talks about the improvements that are  
17 outlined in here, and it was taken for given that, you  
18 know, these were enacted. I mentioned the '62, but  
19 just that the 2012 Water Control Manual was what was in  
20 place. That's what the focus was.

21 MS. DUNCAN: Your Honor, may I respond?  
22 There's a big difference between describing the history  
23 of the project and how it might have changed over time  
24 and then trying to draw conclusions about how it might  
25 have impacted the Water Control Manual and operations

1 over time. He hasn't done that in his report.

2 THE COURT: It seems like a fairly direct  
3 logical leap if you say here's what they had said in  
4 '52 that made is safer. Basically that's -- that seems  
5 to me that's a common conclusion that you could draw.  
6 So I'll allow the question.

7 BY MR. McGEHEE:

8 Q. You can answer the question.

9 A. Okay. Just as far as -- do you mind  
10 re-asking the question? I want to make sure I stay on  
11 point with --

12 Q. Yeah, we can read back the question.

13 A. I'll go though -- I think I have the gist of  
14 it. As far as from the 1962, these improvements were  
15 not in place in the '80s and '90s. Significant amount  
16 of improvements were put in place at the end of the --  
17 at the end of the dams at the auxillary spillways. So  
18 then moving into the new Water Control Manual, it would  
19 not be and I would not have the same concern with scour  
20 that would happen at these auxillary spillways because  
21 they are reinforced with roller-compacted concrete, the  
22 steel plates, et cetera, to be able to look at that.

23 Also in this time period, the spillway design  
24 flood was updated, and that would have been also looked  
25 at that we already went through those tables of having



1     that much higher storm event for designing the  
2     spillways.

3                 THE COURT:   So that's why dam safety has  
4     become a nonissue in the later reports.

5                 THE WITNESS:  Correct, when it comes to the  
6     induced surcharge in allowing flanking flows.

7                 THE COURT:  Usually when I want to do  
8     something, I say, "dam, safety."

9     BY MR. McGEHEE:

10                Q.    Sir, did you review the draft operational  
11     assessment of October of 2009?

12                A.    I did, yes, sir.

13                Q.    I'd like to read two passages, one to  
14     identify whether or not the corps knew it could happen  
15     and, two, whether or not there's support in there of  
16     your opinion for an alternative reason for opening the  
17     gates using the induced surcharge ordinary operating  
18     procedure.

19                First of all, let's look at the operating  
20     constraints under the draft operational assessment  
21     manual.  And can you read the highlights?  Because I  
22     can't.

23                A.    Yes.

24                "The increase in downstream development and  
25     possibly downstream tributary inflow has contributed to

1 reductions in allowable outflows. The dams are  
2 operated strictly to prevent downstream flooding;  
3 therefore, the gates remain shut even if pool levels  
4 increase and flood upstream properties. The flood  
5 pools have never exceeded the limit of government-owned  
6 land and the homes upstream of the dams have not  
7 flooded due to the pool. However, available hydrologic  
8 models indicate that the limit of government-owned land  
9 would be exceeded in extreme events; for example, it is  
10 believed that if Tropical Storms Allison or Claudette  
11 had been centered on the basin, flooding of the  
12 upstream development would have occurred."

13 Q. And now I'd like to turn to page 464103 and  
14 ask whether this suggests another reason for opening  
15 the gates during the induced surcharge procedure  
16 besides dam failure?

17 A. Do you want me to read this first?

18 Q. Yes, please.

19 A. Okay.

20 "With such high valuation of upstream  
21 properties, it might be desirable to increase the  
22 allowable release rates from the reservoir once the  
23 downstream peak flows have occurred and accept some  
24 increased duration of downstream flooding."

25 Q. Now I'd like to just ask the bottom-line

1 questions that the court asks. In your opinion, did  
2 emergency necessitate opening the gates?

3 A. No.

4 Q. Was -- were the gates opened based on  
5 ordinary operating procedure?

6 A. Yes, following the Water Control Manual  
7 induced surcharge.

8 Q. Thank you.

9 MR. McGEHEE: Your Honor, now we're going  
10 into the gates closed and we're going to go into test  
11 properties. If Your Honor would like a break at -- or  
12 like to permit the defense to call a witness out of  
13 order, that's okay.

14 THE COURT: Okay. Do you want to do that now  
15 or do you want to break for five minutes or...

16 MS. DUNCAN: I think we should take just a  
17 very short break to make sure the witness is here and  
18 get resituated.

19 THE COURT: Okay. We'll make it ten because  
20 it will take us that long to find our way in the maze  
21 here.

22 We will stand in recess for ten minutes.

23 (Off the record from 3:13 until 3:26.)

24 MR. NOLEN: May I proceed, Your Honor?

25 THE COURT: Yes.

1 MR. NOLEN: All right. At this time the  
2 plaintiffs will call Coraggio Maglio.

3 THE COURT: Mr. Maglio, if you'll go up to  
4 the witness stand and raise your right hand and sort of  
5 imagine your left hand is on the Bible which we don't  
6 have there. It's an invisible Bible.  
7 Thereupon--

8 CORAGGIO MAGLIO  
9 was called as a witness and, after having been first  
10 duly sworn, testified as follows:

11 DIRECT EXAMINATION

12 BY MR. NOLEN:

13 Q. Mr. Maglio, would you please state your full  
14 name for the record.

15 A. It's Coraggio Kenneth Maglio.

16 Q. All right. Mr. Maglio, you no longer work  
17 for the Army Corps of Engineers; is that true?

18 A. Yes.

19 Q. When did you leave?

20 A. A couple years ago.

21 Q. Did you work for the Army Corps for about  
22 14 years?

23 A. Yes, sir.

24 Q. Were you working for the Army Corps of  
25 Engineers during Hurricane Harvey?

1 A. Yes, I was.

2 Q. Did you move to Texas in 2016?

3 A. Yes, sir.

4 Q. Did you start with the corps as a design  
5 civil engineer in the waterways section?

6 A. Yes.

7 Q. And when you came to Texas, were you assigned  
8 to H&H?

9 A. Yes.

10 Q. And what is H&H?

11 A. Hydraulics and hydrology.

12 Q. And was that in the Galveston District?

13 A. Yes, sir.

14 Q. What was your title?

15 A. I was the branch chief.

16 Q. The branch chief of engineering or hydraulic  
17 engineering?

18 A. Hydraulics and hydrology.

19 Q. All right. Are you a registered engineer?

20 A. Yes, sir.

21 Q. Were you ever registered in the state of  
22 Texas?

23 A. Yes.

24 Q. And when did you become registered in the  
25 state of Texas?

1           A.     Right about the time I left the corps, so it  
2     would have been '21, '22, somewhere in there.

3           Q.     Prior to -- and I'm not sure that people are  
4     picking you up. Can you kind of direct that microphone  
5     a little bit to your face?

6           A.     Sure.

7           Q.     Yeah, I'm just not sure everybody is able to  
8     hear.

9                     Okay. So during the period of time that you  
10    were supervising the engineering, hydraulic engineering  
11    for the Galveston District, were you not registered in  
12    Texas?

13          A.     No, I was not.

14          Q.     Where were you registered?

15          A.     In the state of Florida.

16          Q.     Any other states?

17          A.     No.

18          Q.     Were you responsible for staffing the Harvey  
19    event for water control purposes?

20          A.     Yes.

21          Q.     Did you physically go to the Barker Reservoir  
22    Field Office on Highway 6 just before Harvey landed in  
23    Houston?

24          A.     Around that point in time, yes.

25          Q.     A little before?

1           A.    It was -- yeah.  It blended together, but,  
2   yes, right around that time.

3           Q.    And were you there to be closer to the dams  
4   and to make hydraulic observations?

5           A.    Yes, sir.

6           Q.    Who else was there with you?

7           A.    I brought four folks from my team, and then  
8   we had the dam safety team, all the folks from the  
9   field office at the reservoirs.

10                  Do you want specific names?

11           Q.    Maybe I can help.

12                  Was Chuck Ciliske there?

13           A.    Yes, he was.

14           Q.    Rob Thomas?

15           A.    Yes, sir.

16           Q.    Was Richard Long there?

17           A.    Yes, sir.

18           Q.    And was the dam tender there?

19           A.    Well, there's numerous dam tenders, but, yes.

20           Q.    Okay.  Do you know who the dam tender was  
21   when you were at the field office?

22           A.    Several people filled that role at various  
23   times, so...

24           Q.    And I --

25           A.    So, yes, they were --

1 Q. Oh, I'm sorry.

2 A. They were present. There were folks that  
3 were dam tenders there all the time.

4 Q. Thank you.

5 Is the dam tender the person within the corps  
6 who actually opens the flood gate?

7 A. Yes.

8 Q. So is it correct that to open the gates, you  
9 have to unlock a control box and push a button?

10 A. As far as I recall, yes.

11 Q. And do you know if during Harvey the corps  
12 operated the reservoir gates in accordance with the  
13 2012 Water Control Manual?

14 A. Yes, sir.

15 Q. Is it your belief that the corps followed the  
16 Water Control Manual to the letter?

17 A. Yes, sir.

18 Q. You were involved in the teleconferences when  
19 putting the reservoirs into induced surcharge; is that  
20 correct?

21 A. I was involved in some of them, I'm sure.

22 Q. You're not the -- you were not the  
23 decision-maker, right?

24 A. Well, no, not the ultimate decision-maker.

25 Q. And when I'm talking about the ultimate



1 decision-maker, I mean the person who would have been  
2 responsible for determining that the reservoir should  
3 be placed in induced surcharge.

4 A. No, it did not fall under me --

5 Q. Okay.

6 A. -- directly.

7 Q. And do you recall that the reservoirs were  
8 opened on August 28th, 2017?

9 A. Yeah, on or about then.

10 Q. After the induced surcharges began, you were  
11 acting as a rover checking out points of concern  
12 related to the reservoirs for the corps?

13 A. Yes.

14 Q. And when I said "rover," do you understand  
15 what that means, that you were just sort of driving  
16 around checking out points of interest?

17 A. Yes, sir.

18 Q. And that's what you were doing?

19 A. Some of the time, yes.

20 Q. And you were reporting back what you were  
21 finding; is that true?

22 A. Yes.

23 Q. At that point, was the corps short staffed?

24 A. We were doing the best that we could with the  
25 staff we had. We always want more, but, yes, we were

1 working with the staff we had.

2 Q. I'm going to show you an email and ask you if  
3 you recognize it.

4 MR. NOLEN: May I approach the witness, Your  
5 Honor?

6 THE COURT: Yes, you may.

7 BY MR. NOLEN:

8 Q. I'm going to leave it with you for a second.

9 MS. DUTTON-BYNUM: Your Honor, can we get an  
10 exhibit number for that?

11 MR. NOLEN: Yeah, I was about to call it. So  
12 the number is JX 110. JX 110.

13 BY MR. NOLEN:

14 Q. Do you recognize that as an email that you  
15 sent?

16 A. Yes.

17 Q. And can you read the email for us?

18 A. "It is barely moving."

19 Q. All right. I'm going to ask that we display  
20 the email that you've identified.

21 And so that's the email that you've got right  
22 in front of you; is that correct?

23 A. Yes, sir.

24 Q. And was that your description of the north  
25 end of Addicks?

1 A. Yes, based on the image in the email.

2 Q. Okay. And so there is an image attached to  
3 the email; is that right?

4 A. Yes.

5 Q. Is that a photograph that you took?

6 A. Yes, sir.

7 Q. Is this the image itself?

8 A. Yes.

9 Q. Is that the amount of water that you were  
10 seeing at that time that was on the north end of  
11 Addicks?

12 A. Yes, sir.

13 Q. And what's the date?

14 A. The 29th.

15 THE COURT: Let me ask a question. By "the  
16 north end of Addicks," do you mean the reservoir?

17 MR. NOLEN: The north end of Addicks, the  
18 spillway on the north end of Addicks, Your Honor.

19 THE COURT: So this is the -- the spillway is  
20 the take up. And it gets to a certain height, the  
21 water comes down the spillways?

22 MR. NOLEN: The water cascades down onto the  
23 spillway, that's correct, and passes over it.

24 THE COURT: Okay. It looks like the spillway  
25 goes into a building. Is that correct?

1 BY MR. NOLEN:

2 Q. Well, actually, that building is off  
3 government-owned land, right?

4 A. Yes, sir.

5 Q. It's about five feet off government-owned  
6 land; is that correct?

7 A. I'm not exactly certain how far it is, but  
8 it's very close to the end of the spillway.

9 MR. NOLEN: Do you have any other questions,  
10 Your Honor?

11 THE COURT: Well, I guess the building -- the  
12 spillway isn't used very much, is it? So I guess the  
13 building can function still?

14 THE WITNESS: Water has never gotten to that  
15 point before or since.

16 THE COURT: Okay. So then did it flood the  
17 building?

18 THE WITNESS: I'm not certain. I would  
19 assume it did. It went up a little higher than this,  
20 so...

21 THE COURT: Okay. Thank you.

22 BY MR. NOLEN:

23 Q. And you just said you would assume it did,  
24 but you actually don't even know if it actually did  
25 flood that building, do you?

1 A. No.

2 Q. And you took the photograph; is that right?

3 A. Yes, sir.

4 Q. And so you were physically there on the 29th,  
5 and the rain was, what, just drizzling at that point?

6 A. Well, during the storm, you had bands come  
7 through. So in between the bands, I would get out the  
8 truck and take pictures when I could.

9 Q. And when you took this picture, it wasn't  
10 actually raining, was it?

11 A. Yes. It was drizzling. It pretty much  
12 consistently drizzled for days.

13 Q. And when you said the water was barely moving  
14 around the northern end or barely moving, tell us what  
15 you were articulating there.

16 A. So what I was trying to make sure everybody  
17 understood, the water was going around the end of the  
18 dams where the dam ties into natural grade. And that's  
19 something we've never seen before, and that meant the  
20 water was leaving government-owned land around the  
21 spillway.

22 Q. But you said "barely moving." So there's a  
23 flowage rate involved in your assessment, correct?

24 A. Yes.

25 Q. And when you said "it's barely moving," can

1     you calculate what the flowage rate was?

2           A.    I don't know if this is from the same image  
3     that I took, but I remember sending a text or an email  
4     or something that said we're seeing about two to  
5     four feet per second moving around the end. I'm not  
6     sure if it's the same time, but it was a very small  
7     quantity of water.

8           Q.    Is it true the corps was never actually able  
9     to quantify the total amount of water that migrated  
10    around the north end of Addicks?

11          A.    Not to my knowledge.

12          Q.    Right.

13                Y'all gave some guestimates, but basically  
14    you couldn't actually even quantify it; is that true?

15          A.    Personally, no.

16          Q.    Well, did you ever see any educated  
17    guesses -- anything other than educated guesses  
18    quantifying the amount of water that was moving around  
19    the north end?

20          A.    No.

21          Q.    Is August 29th when the water first started  
22    flowing around the north end of Addicks?

23          A.    I would assume, yes.

24          Q.    Okay. That's the day you were taking the  
25    picture?

1 A. That's the day that I first observed it, yes.

2 Q. And no water went over the auxillary  
3 spillways of either reservoir or dam, correct?

4 A. No.

5 Q. And I'm going to show you another email.

6 MR. NOLEN: May I approach, Your Honor?

7 THE COURT: Yes.

8 MR. NOLEN: I'm handing the witness JX 109.

9 BY MR. NOLEN:

10 Q. Is that an email that you wrote?

11 A. Yes, sir.

12 Q. And I'm going to go ahead and ask we publish  
13 it, which we just did.

14 And so the email says -- JX 109 says  
15 "Subject: Addicks flow around northern." It's got  
16 another photograph attached. And you wrote,  
17 "Greetings, Flow around the northern end of dam is  
18 minimal currently at 2035. It is about 4" deep and  
19 flowing at 2-4 cfs."

20 Is that right?

21 A. Yes, sir.

22 Q. And I'm going to ask that we take a look at  
23 the photograph itself. And so this is a nighttime  
24 photo of the same location that you were at earlier,  
25 correct?

1 A. Yes, sir.

2 Q. And you took that photograph?

3 A. Yes, sir.

4 Q. And you did not do a formal calculation?

5 That again is a guesstimate on your part?

6 A. Yes.

7 THE COURT: Is that the spillway again we're  
8 looking at?

9 THE WITNESS: That's the end of the spillway  
10 where it ties into natural ground.

11 THE COURT: Okay. So is the reservoir down  
12 at the end or are we at the reservoir?

13 THE WITNESS: I'm standing on the spillway  
14 looking at the end of it where it terminates into  
15 natural ground.

16 THE COURT: Okay. Where it terminates into  
17 what?

18 THE WITNESS: I'm standing on the spillway --

19 THE COURT: Right.

20 THE WITNESS: -- looking towards where it  
21 terminates into natural ground.

22 THE COURT: Into the...

23 THE WITNESS: Into the existing grade.

24 THE COURT: Into existing spillway -- into  
25 the existing --



1 THE WITNESS: Land.

2 THE COURT: -- land or reservoir.

3 THE WITNESS: Yes.

4 THE COURT: So you're where the spillway  
5 would come out? You're standing now at the outside of  
6 the spillway, at the mouth of the spillway or the  
7 entrance into the spillway?

8 THE WITNESS: So I'm standing on -- the  
9 spillway is about four feet higher than where this is.

10 THE COURT: Yes.

11 THE WITNESS: And so it drops down over the  
12 course of many feet and then drops into native ground.

13 THE COURT: Okay.

14 THE WITNESS: Into the natural ground. So  
15 it's going around the end of that tieback.

16 THE COURT: Okay. And that's regular ground.

17 THE WITNESS: Yes.

18 THE COURT: Okay.

19 BY MR. NOLEN:

20 Q. Mr. Maglio, at the time you were taking that  
21 photograph, did you actually have your back to the  
22 reservoir?

23 A. I was standing on the spillway looking along  
24 the length.

25 Q. Right.

1                   And so the structure of the reservoir itself  
2     where it runs into the ground, you're actually --  
3     you've got your back to it, right?

4           A.     Yes.

5           Q.     Okay. To your knowledge, did the corps do  
6     any kind of estimate or analysis of whether any  
7     structures were actually flooded because of migration  
8     of water around the north end of Addicks?

9           A.     I believe we did look at that structure. I  
10    don't remember if it was determined that it got  
11    flooded. My job was to stay on the reservoir itself,  
12    and so I didn't leave at this point to go look anywhere  
13    else, so...

14          Q.     So let me ask you this: You said earlier that  
15    the corps followed the 2012 Water Control Manual. And  
16    is it correct that there was really no discussion about  
17    whether or not to follow it?

18          A.     As far as I was concerned, our job was to  
19    follow the Water Control Manual to the letter of the  
20    law, and that's what we attempted to do in every way  
21    possible.

22                 MR. NOLEN: Okay. And I'm going to approach  
23    the witness again, Your Honor, if that's okay and hand  
24    him another email.

25                 THE COURT: Sure.

1 MR. NOLEN: I'm going to hand JX 089 to the  
2 witness.

3 THE COURT: Okay.

4 BY MR. NOLEN:

5 Q. Is that email an email that you wrote, sir?

6 A. Yes, it was.

7 Q. Okay. I'm going to ask that we go ahead and  
8 put that up so we can see it.

9 And I have -- there's a highlight on here  
10 that I've put up for the purposes of our viewing here.  
11 You can see that this is from you. It is August 27th,  
12 2017, and it looks like it's at 6:18; is that right?

13 A. That seems correct, yes.

14 Q. Okay. And it says "Subject: Following the  
15 water control manual."

16 Do you see that, sir?

17 A. Yes, sir.

18 Q. And although there's some markings on this...

19 Well, we can read the document anyway. The  
20 copy you have doesn't have any markings on it, does it?

21 A. No, it does not.

22 Q. Okay. It says, "If anyone tells you to not  
23 follow the water control manual, we will need to speak  
24 with Rob."

25 Do you see that?

1           A.    Yes, sir.

2           Q.    And you're referring to Rob Thomas; is that  
3 correct?

4           A.    Yes, sir.

5           Q.    And so the reason that I asked earlier about  
6 discussion about following the Water Control Manual is  
7 because this email seems to imply that there may have  
8 been some discussion about not following it. Does that  
9 refresh your recollection at all about whether there  
10 was any discussion about not following the Water  
11 Control Manual?

12          A.    There was lots of ideas that people had that  
13 were not necessarily within the government or in our  
14 chain of command that had lots of opinions, and we were  
15 seeing lots of things on social media. And we were  
16 hearing all of that, especially when we were on phone  
17 calls with them.

18                Our job is to follow the Water Control  
19 Manual, and this was just to remind my team, as most of  
20 their leadership was going to bed, finally, after hours  
21 and hours and days and days, just stay on task, don't  
22 get distracted, don't let anybody sway you. And that's  
23 what this was for, was to remind everybody just do your  
24 job.

25          Q.    All right. So I have to follow up just a

1 little bit about who these communications were that you  
2 were having -- or that you were seeing on social media.

3 Were these people with the Harris County  
4 Flood Control District?

5 A. It's with everybody. So we had multiple  
6 meetings, you know, all hours of the day and night. We  
7 had ABECT meetings where we would reach out to Fort  
8 Bend County, Harris County Flood Control, various  
9 cities and other groups, and there was lot of opinions.  
10 Plus we had lots of social media. We had people  
11 calling in on the helpline at the water control center  
12 in Galveston and their office and emergency management.  
13 So they were hearing all these things.

14 I did not want my guys -- since I was  
15 separated from them, the guys in Galveston, I wanted  
16 them just to stay on task, do your job exactly like,  
17 you know, we've done it before, how we've been trained,  
18 just do what you need to do without any of the noise  
19 clouding your judgment.

20 Q. Is it true that the purpose of induced  
21 surcharge is to avoid uncontrolled releases around the  
22 end of the spillways and over the spillways to try to  
23 control the water?

24 A. More or less that's the intention of it.

25 Q. Is it true that you don't know that the

1 reservoir regulation manual that preceded the 2012  
2 Water Control Manual even existed?

3 A. No, I knew there was prior documents. I do  
4 not, you know, specifically remember what they were  
5 called. But, yes, we've always had methodologies for  
6 maintaining and operating our structures.

7 Q. So do you know that under the prior version  
8 of the water control document for the reservoirs that  
9 the gates would have stayed closed during the event,  
10 Harvey?

11 A. No.

12 Q. And did you ever go back and review that?  
13 You were asked about it in your deposition. Did you  
14 ever go back and take a look at it?

15 A. No, I did not.

16 Q. Okay. And you had not reviewed it prior to  
17 your deposition, right?

18 A. No, not that I recall.

19 Q. And you didn't know at the time that the  
20 reservoir regulation manual did not have an induced  
21 surcharge regulation in it, correct?

22 A. No.

23 Q. And you still don't have an understanding in  
24 that regard?

25 A. No, I've not gone back and investigated that.

1 Q. Have you ever gone back and read or reviewed  
2 any of the depositions of any of your colleagues that  
3 were taken in these cases?

4 A. No, I have not.

5 MR. NOLEN: I'm going to approach again, Your  
6 Honor, and hand the witness one last email. I'm going  
7 to hand JX 106.

8 BY MR. NOLEN:

9 Q. Do you recognize that email, sir?

10 A. Yes, sir.

11 Q. Okay. I'm going to ask that JX 106 be put  
12 up.

13 All right, sir. They've already actually got  
14 it up here, so I'm observing it. I think this is the  
15 second page of the document, so if you'll flip over.  
16 And emails start in the back, so I have to -- they move  
17 forward, and so we have to start at the back. I'm only  
18 going to ask but this part of this email. It's from  
19 Rob Thomas or Robert Thomas. You're cc'd on it. And  
20 the question that is to Michael Sterling says, "How do  
21 you feel about a 6000 CFS deviation. Just thinking  
22 about it."

23 And then the next response is "Very uneasy."

24 Do you see that?

25 A. Yes, sir.

1           Q.    Is the reason for that is because at 6,000  
2    cfs, a deviation of 6,000 cfs, meaning you're releasing  
3    6,000 cfs, that you're going to be putting water into  
4    people's houses?

5           A.    I'm not certain at 6,000 cfs you would be  
6    putting water into homes, but it would be like  
7    outbuildings, sheds, tennis courts. But I don't -- I  
8    don't know if 6,000 cfs we would actually put water in  
9    homes.

10          Q.    Did you believe that 6,000 cfs was going to  
11    inundate at least some people's properties?

12          A.    They're living space? I don't believe so.

13                MS. DUTTON-BYNUM: Objection, Your Honor. I  
14    think he's mischaracterizing his testimony. He never  
15    said that he was -- that he felt a certain way about  
16    the cfs deviation.

17                THE COURT: I think it was clarified he  
18    indicated now he didn't say that, so I'll overrule the  
19    objection since it's been asked and answered.

20                MR. NOLEN: May I approach the witness again,  
21    Your Honor?

22                THE COURT: Yes.

23                MR. NOLEN: All right. I've handed the  
24    witness his prior testimony, and I've asked him to  
25    review page 205, lines 2 through 22, which I've



1 highlighted for him.

2 BY MR. NOLEN:

3 Q. Tell me when you're finished, sir.

4 MS. DUTTON-BYNUM: Objection, Your Honor, to  
5 improper impeachment.

6 THE COURT: What?

7 MS. DUTTON-BYNUM: Improper impeachment.

8 THE COURT: Well, you're asking him to read  
9 his -- we haven't had a question yet, but he's asking  
10 to read his prior testimony.

11 MS. DUTTON-BYNUM: But there's been no  
12 contradicted statement.

13 THE COURT: Well, it hasn't been raised yet.  
14 You've interrupted before he's gotten to the thing that  
15 might be improper. He hasn't gotten there yet. So  
16 I'll allow him to read, and then he can -- counsel will  
17 ask the question, and then you can object if you want  
18 to.

19 BY MR. NOLEN:

20 Q. Have you read it, sir?

21 A. Yeah. Do you want me to read it out loud?  
22 Or what do you mean?

23 Q. No. I'm just going to ask you a question.

24 So I'm going to ask you, then, you knew at  
25 6,000 cubic feet per second the corps was going to

1 inundate people's homes, including the living areas of  
2 those homes, correct?

3 A. According to this, it sounds like I did  
4 believe at the time, yes.

5 Q. All right. And when you say "according to  
6 this," looking at your prior testimony, it appears that  
7 that's what you testified to, correct?

8 A. Yes.

9 Q. All right. I want to focus on the period of  
10 time before Harvey. Let me have that deposition back,  
11 if you don't mind.

12 A. Apparently I'm the one who is doodling on the  
13 screen whenever the thing touches. I don't know how  
14 you clear that, but...

15 THE COURT: Is that from the past or is  
16 current?

17 THE WITNESS: It's whenever I pull the paper  
18 and it touches the screen, it adds stuff.

19 BY MR. NOLEN:

20 Q. Well, I'm not going to show you any more  
21 exhibits, I don't think. But opposing counsel may, so  
22 we may need to figure that out before they start asking  
23 questions.

24 So I want to focus on the period of time  
25 before Harvey. You actually never attended any type of

1 meeting with members of the public developers or  
2 elected officials where there was any discussion of  
3 induced surcharge; is that right?

4 A. No, I never attended any of those.

5 Q. Okay. And if you went out and talked with  
6 anybody about induced surcharge or what that was or  
7 whether that was in the 2012 Water Control Manual, any  
8 of those discussions came after Harvey; is that true?

9 A. No, that's not true.

10 Q. Okay. So prior to 2012 -- I mean prior to  
11 Harvey, you had gone out and discussed with members of  
12 the public or developers or city officials or county  
13 officials about induced surcharge?

14 A. So we had had meetings with our ABECT  
15 committee, and we had talked about that post Tax Day.

16 Q. Okay. The ABECT committee is a meeting  
17 that's a coordinated committee with the county and the  
18 city; is that true?

19 A. A couple counties, a bunch of various  
20 municipalities, the City of Houston, yes.

21 Q. But presentations to the public you did not  
22 do, correct?

23 A. No.

24 Q. And you were not present for any  
25 presentations to the public regarding induced surcharge

1 prior to Hurricane Harvey; is that correct?

2 A. No, I was not.

3 Q. All right.

4 MR. NOLEN: I'll pass the witness. Thank you  
5 very much.

6 THE COURT: Okay. Counsel for the  
7 government.

8 MS. DUTTON-BYNUM: Yes, Your Honor.

9 CROSS-EXAMINATION

10 BY MS. DUTTON-BYNUM:

11 Q. Good evening, Mr. Maglio.

12 We heard you talk a little bit about your  
13 role during Harvey. I want to kind of hear about your  
14 experience during the Harvey event.

15 When were you called to be at the project  
16 office?

17 A. We were watching Harvey all that preceding  
18 week, and we made the decision the day before, the  
19 Thursday of that event, that we needed to go the  
20 following day and deploy people up there so that we had  
21 boots on the ground ready to make observations or any  
22 other activities necessary.

23 Q. And when you say you were trying to figure  
24 out things, where were you physically during this call  
25 of assessing where the staff would go?

1           A.     So we were in Galveston. We were game  
2     planning how we were going to staff for the event, who  
3     was going to be in the district office in Galveston  
4     versus who was going to go up to the reservoirs and man  
5     the posts up there.

6           Q.     And you said you went down that Thursday  
7     before?

8           A.     Friday.

9           Q.     The Friday. Okay.

10                  And when you went down to the project or to  
11     the dam, where were you on that Friday?

12           A.     We drove up to a hotel adjacent to basically  
13     610 so that we could easily get to the offices of the  
14     corps and the dams.

15           Q.     And when you say "we," who is we?

16           A.     I initially brought four staff and myself.  
17     We had to send one back to the district office to run  
18     models, so I ended up with three staff, H&H staff and  
19     myself at the project offices.

20           Q.     Okay. And so you're at the hotel. You get  
21     to the hotel. What do you do next?

22           A.     We set up shop, get ready to do all the  
23     calls, all the emails, all the things we were doing  
24     continuously. We stayed in the hotels for a day or  
25     two, and then we started meeting at the project offices

1 and working from that location.

2 Q. Okay. And when did you go to the dam?

3 A. I think it was Saturday, I believe. So  
4 Saturday or Sunday. So we transitioned from the hotel  
5 to the dams themselves.

6 Q. And when you say your team transitioned, how  
7 did you transition? Where did you go? Where did they  
8 go? Were you all together?

9 A. We went to the project office.

10 Q. Okay.

11 A. Some of them I believe stayed at the hotel  
12 longer than I did. And we started just having meetings  
13 in person at the project office when we could.

14 Q. And so you mentioned that you supervised the  
15 hydraulic observation team. What was your role? What  
16 were you-all observing?

17 A. So that role evolved throughout the entirety  
18 of the event. So initially there's not much flooding  
19 happening, it's just rain falling and it hasn't pooled  
20 and caused damage yet, so there's not a whole lot to  
21 see. So we were just getting all our ducks in a row to  
22 make sure that we have a game plan. We start thinking  
23 about staffing, who is going to be up at what hours.  
24 And so that's the main focus at the front end of an  
25 event until the rain falls and you have significant

1 issues to address. And then just try to get sleep and  
2 be ready when you're going to need to work extremely  
3 long hours to go do observations, make sure there's no  
4 damaging flows happening, you're not seeing any  
5 scouring or slumping. We were primarily focused on  
6 initially the discharges, just making sure that, you  
7 know, there weren't any issues that we could see and  
8 potentially address.

9 Q. And how did you divvy up the team?

10 A. Since I was down a person, I had to deploy  
11 myself to be one of the observers, so I was down to  
12 three staff and myself. And then two or three days in,  
13 one of my staff didn't feel well, so I ended up having  
14 to be out on the Addicks Reservoir myself. And I put  
15 my other two staff on Barker because they had access  
16 directly to the National Guard Armory, so they had a  
17 safe place to get to every day. And I knew I was going  
18 to lose access to leave Addicks, so I just put myself  
19 there.

20 Q. And you mentioned the dam safety team before.  
21 What's the difference between your team and the dam  
22 safety team?

23 A. So we have different roles and  
24 responsibilities. Typically the dam safety team stays  
25 on the reservoirs themselves. They're looking for

1 slumping or boils or any sort of failure mechanism  
2 going on. Sometimes they're checking piezometers which  
3 are measuring water levels in the interior of the dam.  
4 So their focus is on the dam itself. We're looking for  
5 any water issues. Typically we're rovers, so we can  
6 leave the site. We can go look at sites downstream or  
7 upstream of the reservoirs. But during the main  
8 rainfall event, we couldn't go anywhere. We were on an  
9 island, basically. So we were just like the dam safety  
10 guy, we were trapped there. But then we had to collect  
11 information, different types of information. We lost  
12 some of our gauges. We were measuring the water levels  
13 upstream and downstream, and then reporting that back  
14 to the dam safety team that was feeding that back to my  
15 team in Galveston.

16 Q. You mentioned you were on an island. What do  
17 you mean by that?

18 A. So the dams themselves, there was water  
19 everywhere. You couldn't leave for a couple days. You  
20 could not exit the dams from Addicks, so it was an  
21 island. It was the only high ground around. Upstream  
22 and downstream were under water.

23 Q. And so let's talk about when you get to the  
24 dam on -- which dam were you --

25 A. I was on Addicks.



1 Q. Addicks. Okay.

2 What do you do when you get to the dam on  
3 that Friday or Saturday that you mentioned?

4 A. I believe it was Sunday when I --

5 Q. Sunday.

6 A. -- headed over to Addicks.

7 Q. Okay.

8 A. It was Sunday or Monday. I just started  
9 making observations. If I saw anything strange, out of  
10 place, we would call the back, take pictures, let  
11 people that are -- our geotech experts look at things.  
12 If I'm taking measurements, I'm relaying that back to  
13 the people that need to input that data into the models  
14 to run simulations.

15 Q. And you mentioned gauges. What's a gauge?

16 A. So around the reservoirs and many of the  
17 incoming tributaries and downstream streams, we have  
18 water level sensors that measure the height of the  
19 water so that we can feed that into our numerical  
20 models and make decisions that are dictated by the  
21 Water Control Manual.

22 Q. And how do you measure the water by the  
23 gauges, if you could just explain for the court?

24 A. So the gauges have a pressure sensor in a  
25 tube that's down in the water, and it measures the

1 weight of the water above it, so it tells how high the  
2 water is.

3 Q. And how did the gauges hold up during  
4 Hurricane Harvey?

5 A. We lost a lot of gauges. Most of them at  
6 Addicks at one point were down, and so we had to do  
7 manual readings.

8 Q. And when you say you lost the gauges, what do  
9 you mean by that?

10 A. They went under water.

11 Q. And so the gauges are under water. How are  
12 you measuring the water at this time?

13 A. We had a thing called a plumb bob, which is  
14 like a tape measure with a weight on the end, and we  
15 would lower it down, and we'd measure the water  
16 surface.

17 Q. Have the gauges --

18 THE COURT: I was going to ask, the gauges  
19 are not waterproof?

20 THE WITNESS: Not the brainbox of them. They  
21 were not supposed to go under water. They were  
22 designed well above the hundred-year water level and  
23 they still were submerged.

24 THE COURT: Thank you.

25

1 BY MS. DUTTON-BYNUM:

2 Q. And have the gauges ever been under water  
3 before, to your knowledge?

4 A. Not that number, for sure. But some of them  
5 I'm sure have gone under during other short, small  
6 events. We lost a lot of gauges, so...

7 Q. And how long did you have to do these manual  
8 readings?

9 A. If I remember correctly, it was something  
10 like three days at Addicks.

11 Q. And how often were you required to do these  
12 manual readings?

13 A. If I remember correctly, we were trying to do  
14 them hourly.

15 Q. And were you the one doing these manual  
16 readings?

17 A. Yes, at Addicks.

18 Q. For all three days?

19 A. Yeah, for as long as I could. I stayed up  
20 for apparently around 36 days before -- or 36 hours  
21 before I couldn't wake up anymore. And then I slept  
22 for a few hours, and then I was back at it. But I had  
23 to get woken up by National Guardsman to make sure I  
24 was alive, so...

25 Q. You were woken up by -- what do you mean my

1     that?

2           A.     I mean I fell asleep in my truck on the top  
3     of the reservoir and no one could get ahold of me  
4     because I was unconscious. After, you know, several  
5     days in the field and a few days or a day and a half  
6     being awake, I couldn't wake up anymore.

7           Q.     And --

8           A.     So they sent somebody to make sure I was  
9     alive.

10          Q.     Okay.

11          A.     And he woke me up.

12          Q.     And during these manual readings as well, if  
13     you could just paint of picture of what that looked  
14     like for 36 hours every hour. How were you using these  
15     plumb bobs and how were you getting those measurements  
16     to your team?

17          A.     So we have a box on the side of the handrail  
18     of the control structure, and we would take this reel,  
19     kind of like a fishing reel, and we'd lower it down  
20     with this tape all the way down to the water surface.  
21     The last couple of feet we would let it free fall. It  
22     would hit the water surface, move the debris out. And  
23     then we were able to pull it up real fast, get to the  
24     water surface before the debris came back in and would  
25     mess up the measurement. So that's what we would do

1 every hour. And then I would get back to the truck  
2 after taking the reading, and I would text it back to  
3 the office, and then they would relay it back to the  
4 water control center.

5 Q. And those measurements, what were -- how were  
6 your team using those measurements at the time?

7 A. So they were using it as inputs into our  
8 spreadsheets or our numerical models, and that would  
9 tell us how to regulate the reservoir, when do we need  
10 to open gates, when do we do something different other  
11 than keep everything closed.

12 Q. I know you mentioned you were the one  
13 responsible for 36 hours. Was it difficult to measure  
14 with a plumb bob in the middle of a storm?

15 A. It was a little bit of a learning curve.  
16 But, yeah, it's not that hard after you get the hang of  
17 it.

18 Q. Are there things in the water while you're  
19 measuring?

20 A. There was tons of debris blown in from the  
21 wind and the flood itself. There were fire ants that  
22 you would be hitting periodically, you know, whatever  
23 was down there. So you just had to deal with what we  
24 had.

25 Q. Okay. Let's pull up JX 110. You were shown

1 a few pictures.

2 Before we pull it up, can you explain what  
3 fire ants are so Judge Smith can --

4 A. So fire ants are ants. But when you have a  
5 big flood, the entire mound, all the ants come out  
6 together and make a raft, and they hold together and  
7 they float as large blobs. And we had a tremendous  
8 amount of fire ants at Addicks at the control  
9 structure. At one point, acres I would say. It was  
10 pretty insane.

11 Q. So we can pull up JX 110, just the photo that  
12 you took on the 29th.

13 A. Okay.

14 Q. Why did you take this picture?

15 A. Because it was potentially the first time  
16 water had reached the end of the dams, the spillways,  
17 in recorded history.

18 Q. And you say "potentially." What do you mean  
19 by that?

20 A. We've never had anything like this before  
21 and, you know, I wanted to document when we finally got  
22 to the point where the water was at this elevation.

23 THE COURT: It wasn't the beauty of the  
24 picture? Just captured this beautiful scene?

25 THE WITNESS: Yeah, something like that.

1 Modern art.

2 BY MS. DUTTON-BYNUM:

3 Q. And why was that significant to you about  
4 water being on this end of the spillway?

5 A. It meant the water was going around the  
6 reservoir and then flowing down along the exterior toe.  
7 And if that continued, you would have a wet exterior  
8 toe. It would get wetter and wetter, which is a bad  
9 thing for dam safety.

10 Q. And can you explain what the wet toe -- what  
11 that means?

12 A. So the way these dam structures work is they  
13 use the sheer strength and other properties of the dry  
14 material itself to hold back the water that's inside of  
15 them. And the more water you have on the outside, it  
16 starts losing strength, and you can have slumping on  
17 the exterior and ultimate dam failure which would have  
18 been extremely catastrophic.

19 Q. Let's move -- let's show I believe it's  
20 JX 89, one of the email chains that you were shown  
21 before.

22 MS. DUTTON-BYNUM: And can you do JX 116?

23 We'll move on from this and we'll come back  
24 to it.

25

1 BY MS. DUTTON-BYNUM:

2 Q. You spoke briefly about -- you were shown an  
3 email about testing the gate operability. Why did  
4 y'all test the gate operability?

5 MR. NOLEN: Objection, Your Honor. He's  
6 never seen any email about gate operability. I didn't  
7 show him any.

8 THE COURT: This doesn't seem relevant to  
9 direct.

10 MS. DUTTON-BYNUM: And, Your Honor, as a  
11 reminder, we are also presenting our direct examination  
12 at the same time --

13 THE COURT: Okay.

14 MS. DUTTON-BYNUM: -- as defendant. I can  
15 pull it up, JX 106.

16 THE COURT: Okay. We'll put that -- show the  
17 record it reflects that this is more direct testimony.  
18 So I'll overrule the objection.

19 BY MS. DUTTON-BYNUM:

20 Q. Do you see the email in front of you,  
21 Mr. Maglio?

22 A. Yes, I do.

23 Q. I'll direct your attention to the top of the  
24 email. What did you send to your colleague, would you  
25 say?



1           A.     So it was basically just letting the folks in  
2     the field office know, the dam tender, the guy that was  
3     leading much of that team, that we have authorization  
4     to test the gates.

5           Q.     And why did you need to test the gates?

6           A.     Well, we had -- I believe at this point in  
7     time we had never had as much water within the  
8     reservoirs before, and so one of the critical items  
9     that we wanted to make sure is when we do have even  
10    more water behind these gates, we knew -- we know  
11    that -- we believe they're all still going to function  
12    as intended, and that if they're going to fail, they  
13    will fail in the down position. So we wanted to just  
14    test them all to see if there's any issues. And in  
15    structures this large and this old, you always have,  
16    you know, things happening that you don't expect. You  
17    have strange sounds. And they were very, very old at  
18    the point in time, so we just wanted to make sure  
19    everything was behaving properly.

20          Q.     And did they -- did everything behave  
21    properly when you tested them?

22          A.     If my memory serves me right, one did not  
23    work properly at all and we had --

24                 THE COURT:   What didn't work properly?

25                 THE WITNESS:   One of the gates had an issue.

1 THE COURT: One of the what?

2 THE WITNESS: One of the gates, the gates --

3 THE COURT: Oh, gates.

4 THE WITNESS: -- that would open and close  
5 and release the water.

6 BY MS. DUTTON-BYNUM:

7 Q. And we'll just go to the bottom of this email  
8 really quick as well that you were asked a question  
9 about.

10 So the bottom email that Rob sent, Rob Thomas  
11 sent to the group asking about the deviations, did you  
12 respond to the email in this email chain?

13 A. It doesn't look like I responded to Rob's  
14 initial thoughts, no.

15 Q. And so who said that? Or so you weren't the  
16 one who said "very uneasy" to the response?

17 A. No. That was Michael Sterling from division.

18 Q. Okay. Let's move just briefly talking about  
19 the Water Control Manual that you were asked by  
20 opposing counsel. So what -- sorry. One second.

21 From your understanding, what is the Water  
22 Control Manual?

23 A. It's a guide that tells us how to -- the  
24 purpose of the dams, how to operate the dams, how to  
25 maintain the dams, and so it's our go-to book. It

1 gives you a lot of history. It walks you through the  
2 entire purpose and function of the reservoirs.

3 Q. And so you've seen the Water Control Manual  
4 before?

5 A. Many times.

6 Q. Okay. Let's pull up JX 2. We can go to the  
7 table of contents. And so you're familiar with the  
8 operations of the dams?

9 A. Yes.

10 Q. Is that found in the Water Control Manual?

11 A. There's larger concepts. We have more  
12 detailed operational procedures that we follow, but the  
13 regulation rules are in here.

14 Q. Let's go to the Water Control Plan page next.  
15 So 7-05, what does that lay out?

16 A. So normal flood control regulations versus  
17 induced surcharge, and then constraints regarding flood  
18 control operations. So more or less, some things you  
19 need to consider.

20 Q. And are induced surcharges normal flood  
21 control, covered under the normal flood control?

22 A. No, they're anything but normal. They are  
23 when you're well out of the range of a normal flood.  
24 Like in Hurricane Harvey, we had had way more water  
25 than we had ever had before. When Tax Day occurred, we

1 double the pools of record. And then when Harvey  
2 occurred, we doubled those pools of record and it put  
3 us into induced surcharge at the first time at both  
4 reservoirs. So it was well off the reservation of  
5 normal.

6 MS. DUTTON-BYNUM: Your Honor, if I can get  
7 just one moment to confer with my table?

8 THE COURT: Yes.

9 MS. DUTTON-BYNUM: Your Honor, We'd to move  
10 JX 106 into evidence.

11 THE COURT: Okay.

12 Any objection?

13 MR. NOLEN: No, Your Honor.

14 THE COURT: Okay. That's admitted.

15 (Admitted Exhibit No. JX 106.)

16 MS. DUTTON-BYNUM: All right. At this time,  
17 I pass the witness, Your Honor.

18 THE COURT: Okay.

19 MS. DUTTON-BYNUM: Or conclude this  
20 examination, rather.

21 THE COURT: Any -- Mr. Nolen, any final  
22 redirect?

23 MR. NOLEN: Just a little bit, Your Honor.

24 THE COURT: Okay.

25

1 REDIRECT EXAMINATION

2 BY MR. NOLEN:

3 Q. So, Mr. Maglio, it's true that the corps lost  
4 monitors on Memorial Day 2015, right?

5 A. I'm not certain. I wasn't at the -- at the  
6 time. But, yes, it was a significant flood. I don't  
7 know if we lost -- gauges? Is that what you meant?

8 Q. Yes.

9 A. I would assume so. It was pretty  
10 significant.

11 Q. And also on Tax Day 2016, right?

12 A. I believe we did lose a few.

13 Q. Right.

14 And you weren't there for Tropical Storm  
15 Allison in 2001, were you?

16 A. No, I was not.

17 Q. All right. That was a pretty significant  
18 flooding event, correct?

19 A. Yeah.

20 Q. Do you believe or know whether gauges were  
21 lost during that event?

22 A. I am not certain.

23 Q. Okay. And you called this water flow around  
24 the north end of Addicks negligible, right?

25 A. Yes, at this time. Yeah.

1 Q. Yeah. Well, no. It never changed, though,  
2 did it? In other words, it never got deeper than your  
3 picture at 9:42 on the 29th, did it?

4 A. I don't believe it did.

5 Q. Right.

6 And so you called that negligible, correct?

7 A. Well, it's not a lot of water.

8 MR. NOLEN: All right. Thank you, Your  
9 Honor. We would move -- plaintiffs would move to admit  
10 Exhibits JX 110, JX 109, JX 089, JX 106. Those were  
11 the exhibits that I covered with the witness earlier.

12 THE COURT: Any objection?

13 MS. DUTTON-BYNUM: No objection, Your Honor.

14 THE COURT: Okay. Those will be admitted.

15 (Admitted Exhibit No. JX 110.)

16 (Admitted Exhibit No. JX 109.)

17 (Admitted Exhibit No. JX 089.)

18 (Admitted Exhibit No. JX 106.)

19 THE COURT: Any final question? Any final  
20 recross?

21 MS. DUTTON-BYNUM: No, Your Honor.

22 THE COURT: Okay.

23 Mr. Maglio, the court thanks you very much  
24 for your testimony and you are now excused.

25 THE WITNESS: Okay.

1 (Witness excused.)

2 MR. NOLEN: I'm going to retrieve the  
3 exhibits, if you don't mind, Your Honor.

4 THE COURT: Oh, no.

5 Why don't we take a break before we resume  
6 with the witness we had prior to inserting Mr. Maglio  
7 into the schedule. And it's 4:20. Let's take, the  
8 court needs to do some things, a 15-minute break. But  
9 after that, how long will the witness take that we  
10 have? Mr. McGehee I should be asking.

11 MR. McGEHEE: Yes, sir. And I was going to  
12 give you the option of quitting for the day or I think  
13 I can finish my direct in 30 or 40 minutes.

14 THE COURT: Well, that sounds like a  
15 reasonable way, and then the government can begin cross  
16 on Monday.

17 Okay. Why don't we take a 15-minute break.  
18 We'll come back and do that witness, and then hopefully  
19 be out of here by 5:00 to 5:30 range.

20 Okay. We'll stand in recess.

21 (Off the record from 4:21 until 4:38.)

22 THE COURT: The witness was sworn in earlier  
23 today, so still under oath. Welcome back.

24 THE WITNESS: Thank you, sir.

25 MR. McGEHEE: Your Honor, I sensed that you

1     were a little unsure of the positioning and where we  
2     were when we saw what I called the puddle picture, so  
3     I'd like to start out by asking Mr. Bardol to situate  
4     us starting with that picture that we used with  
5     Mr. Maglio.

6                 THE COURT: Yeah, that's probably a good  
7     idea. I was a little unsure when you were dealing with  
8     two-dimensional pictures in a three-dimensional scene.

9                 MR. McGEHEE: I understand.

10                DIRECT EXAMINATION (Continued)

11     BY MR. McGEHEE:

12                Q.     So, Mr. Bardol, you recall that picture that  
13     Mr. Maglio --

14                A.     I do, yes.

15                Q.     And here I have a blowup of that very same  
16     picture.

17                A.     Yes.

18                Q.     And now I want to migrate from deposition --  
19     or from blowup to blowup.

20                A.     Yeah.

21                Q.     On this blowup, where we're looking at that  
22     puddle, I'm calling it a puddle, is right here,  
23     correct?

24                A.     If that could just be moved back. This other  
25     one is blocking. I can't see the full...



1                   Yeah, there we go.

2           Q.     Does that help?

3           A.     Yes.

4           Q.     Okay. And we're standing right here,  
5 correct?

6           A.     Correct, on the very northern end of that  
7 blue tip.

8           Q.     And we're looking that way?

9           A.     Correct. We're looking in a northerly  
10 direction, yes.

11          Q.     Okay. And then on this masterpiece of a  
12 document right here --

13          A.     Yes.

14          Q.     -- we're at the very top of the dam, correct?

15          A.     On the top of the dam, but we're the very  
16 northern end. So the dam -- the dam structure wraps  
17 around from the blue line, goes down to the green to  
18 the south, and then it goes the west still on that --

19          Q.     Right.

20                   And that private building that doesn't even  
21 look wet yet, that private building --

22                   THE COURT: That was a government building, I  
23 think.

24                   MR. McGEHEE: The nongovernment --

25                   THE COURT: I thought it was a government

1 building. Or nongovernment? Somehow I thought --

2 MS. DUNCAN: I mean, I can tell you, but you  
3 could also ask the witness.

4 THE WITNESS: Yeah, my understanding, this is  
5 off government-owned property, so it's a private  
6 building, as I understand. This picture, we're  
7 standing -- or the individual, Mr. Maglio, is standing  
8 on the dam structure on the spillway looking north, so  
9 that building is off government-owned property.

10 BY MR. McGEHEE:

11 Q. Okay. So that building, the nongovernment  
12 building, we've got a little white spot here right  
13 here. Is that where the building is situated?

14 A. That is my understanding, yes.

15 THE COURT: Okay. So it's on government  
16 property?

17 THE WITNESS: No, it's just off. It's just  
18 off.

19 THE COURT: Just off. Okay.

20 THE WITNESS: Yes.

21 BY MR. McGEHEE:

22 Q. And if you're looking at that, if you're  
23 looking at that picture, behind me, if I just do an  
24 about face, what I'm doing is I'm looking down this way  
25 at miles and miles of the top of the dam?

1           A.    Of the -- yes, of the earthen embankment,  
2   that's the dam.  So then the water here is flowing from  
3   left from behind the reservoir behind the dam to the  
4   right.  So the spillway is not the classic spillway  
5   that -- you see that looks like a slide.  This is a  
6   spillway that's concrete here where the water is  
7   flowing from left to right, so it's protecting the top,  
8   the crest they would call of it the dam structure.

9           Q.    And now for the timing -- and I don't mean to  
10   understate or overstate it, but that -- I call it a  
11   puddle, that amount --

12                MS. DUNCAN:  Objection, Your Honor.

13                THE COURT:  Well...

14                MS. DUNCAN:  He continues to call this a  
15   puddle.  It's argumentative.  That's now how the  
16   witness described it.

17                THE COURT:  Okay.  Well, it's not evidence  
18   that it's a puddle.  The court will ignore that it --  
19   it looks like a puddle, though.

20                MR. McGEHEE:  I'm not going to go there.

21                THE COURT:  It's some water, some water,  
22   whatever you want to call it.  It looks like a puddle.

23   BY MR. McGEHEE:

24           Q.    We'll call that that amount of water.  There  
25   you go.  That amount of water is what's on the

1     auxillary spillway at the same time that the outlets  
2     are open and the downstream properties are flooding; is  
3     that correct?

4             MS. DUNCAN:  Objection.  Leading.

5             THE COURT:  What?

6             THE WITNESS:  When this picture was taken,  
7     the...

8             THE COURT:  What is the objection?

9             MS. DUNCAN:  The objection is leading.

10            THE COURT:  Well, yeah, it is leading.  But  
11     it seems to me, again, this is getting us advancing, so  
12     I'll allow the question.

13            Yes, go ahead.

14            THE WITNESS:  This picture was taken, as I  
15     understand, from the -- I'm just hearing this, when  
16     the -- it was under induced surcharge, the gates would  
17     have been opened, so the -- there would have been the  
18     flow through the outlet structures, both of them,  
19     Addicks and Barker.  And then this is part of the  
20     flanking flows that was discussed in my report and the  
21     previous --

22            THE COURT:  But this would have been during  
23     the flooding, the flooding time that the plaintiffs'  
24     property was flooded?

25            THE WITNESS:  At some of the times, yes.

1           THE COURT: Even though at this point it's  
2 clearly not raining or it may be drizzling.

3           THE WITNESS: Correct, yeah. There was  
4 the -- because the gates were opened during induced  
5 surcharge. That was allowing the water through -- out  
6 of the primary outlets into the headwaters of Buffalo  
7 Bayou.

8           THE COURT: Okay. So the spillway then, you  
9 know, I want to make sure I'm not confused, ran around  
10 where that blue line is. It wasn't just a straight  
11 slide. It was ran around the property on the top of  
12 the dam?

13          THE WITNESS: Correct. It was -- the  
14 roller-compacted concrete was placed on top of the very  
15 northern end of the dam. So each of the ends of the  
16 dams, those were the auxillary spillway where water was  
17 allowed to flank around it.

18          THE COURT: Okay.

19          THE WITNESS: So they placed it further, I'll  
20 say, upstream closer to the center of the dam. So  
21 you're going from the blue down to the green, it's  
22 going to be a higher elevation. So the  
23 roller-compacted concrete would be at the top, and then  
24 it runs down the back side if it overtops there.

25               Then when you keep going to the north, that

1 dam, that maybe is, you know, 10 feet, 15 feet at that  
2 point, it starts getting narrower and narrower and it  
3 meets with you heard the "natural grade." So at this  
4 point is elevation one zero eight, 108, that's where  
5 the dam, you know, kind of kisses -- touches down onto  
6 the natural grade, and it still has this concrete pad  
7 there so that way it won't scour when water flows  
8 across it.

9 THE COURT: Okay.

10 THE WITNESS: And that continues on as the  
11 dam gets higher.

12 THE COURT: Hopefully I'll get to see some of  
13 this whenever we go to the dam.

14 THE WITNESS: Yes.

15 THE COURT: We damn well will go to the dam.

16 MR. McGEHEE: And so you're going to drive  
17 right up to that spot on the site visit.

18 THE COURT: Okay. Mr. Puddle won't be there,  
19 or whatever it is.

20 MR. McGEHEE: And the puddle will be gone.  
21 The nonpuddle will be gone.

22 THE COURT: The nonpuddle.

23 BY MR. McGEHEE:

24 Q. Mr. Bardol --

25 A. Yes, sir?

1           Q.    -- the opposing expert, Mr. Nairn, wrote a  
2    report -- did a model, and we're going to compare your  
3    model with his model. Before we do that, I'd like you  
4    to hear what Mr. Nairn said about your model so that  
5    you can respond and we can fill out a chart that I've  
6    shown you and we've seen before. Are you with me?

7           A.    Yes, sir.

8           Q.    I'd like to read from Mr. Nairn --

9           MS. DUNCAN: Objection.

10          THE COURT: What is your objection?

11          MS. DUNCAN: My objection is that this is  
12   improper rebuttal testimony. Dr. Nairn hasn't  
13   testified. And, moreover, it's an improperly disclosed  
14   opinion because none of this information is in  
15   Mr. Bardol's opinion. So we have multiple issues here.

16          MR. McGEHEE: Your Honor, we disclosed this  
17   line and verse to opposing counsel on Tuesday, and I'd  
18   like him to know what the opposing expert is going to  
19   say and hear his response to it. And I'd like to read  
20   a sworn deposition testimony where counsel attended two  
21   questions from his sworn testimony.

22          THE COURT: Okay.

23          MS. DUNCAN: Your Honor, may we re-urge the  
24   objection? In addition, it's irrelevant what Dr. Nairn  
25   said about Mr. Bardol's testimony. If they want to ask

1 Dr. Nairn about his testimony when he provides it, they  
2 can certainly do that. But they're trying to pre-admit  
3 Dr. Nairn's sort of opinions in this context. It's  
4 inappropriate to read another expert's sort of  
5 testimony to an expert and say "What do you think?"

6 THE COURT: Well, I don't think that's  
7 inappropriate in itself. It may be unusual, the  
8 procedure we're using here, but I don't think it  
9 violates any rule. I'll allow the testimony.

10 MS. DUNCAN: Your Honor, may I note that -- I  
11 mean, this is hearsay. It's an out-of-court statement  
12 used for the truth of the matter that it asserts, so it  
13 does violate that.

14 THE COURT: Well, and that -- you -- this is  
15 kind of cross-examination in reverse, using the  
16 deposition before effectively the testimony has been  
17 given live, so I'll allow it.

18 BY MR. McGEHEE:

19 Q. Reading from page 37, line 13 through line 16  
20 from Mr. Nairn, "They are" -- and we're talking about  
21 the two models, your model and his model. "They are in  
22 the model results. And we did review and compare the  
23 results for the closed gate between Geosyntec's model  
24 and our model and they're very similar."

25 Reading from page 48, line 10 through 13, "I



1 have looked at the model results for downstream with  
2 gates closed and compared those to the model results  
3 for downstream gates closed from Geosyntec and the  
4 models generally are similar."

5 Do you agree with Dr. Nairn's statements?

6 A. Yes, in many situations they are similar.  
7 Very similar.

8 Q. Explain your --

9 THE COURT: A little louder.

10 THE WITNESS: Oh. Yes, the models are very  
11 similar.

12 BY MR. McGEHEE:

13 Q. Explain your methodology for the way you  
14 developed your model.

15 A. Yes. As far as the methodology, this is laid  
16 out in my report, but I'll try to give a summary. Do  
17 you want me have you go to the section or...

18 Q. If your report is useful, that's fine. If  
19 not, you can just tell us --

20 A. Okay.

21 Q. -- your methodology.

22 A. Yeah, I'll just go through it. And then if  
23 we have to cite part of the report, I can go there.

24 Our -- our approach, the big picture of it,  
25 was to use the same models as the Army Corps of

1 Engineers would have had access to at the time, also  
2 the Harris County Flood Control District. So  
3 there's -- one of the models is a hydrology model.  
4 It's called HEC-HMS. So that looks at the  
5 precipitation of the watershed, and it looks at the  
6 runoff of how much water is going to be flooding in  
7 some -- in an area. We use that read -- that model is  
8 also used by Harris County Flood Control District and  
9 by FEMA that does -- the Federal Emergency Management  
10 Agency that also does all the flood maps in the area.  
11 So both of those U.S. Government agencies, both at the  
12 federal level and the local flood control district,  
13 uses that model. There's also Dr. Bedient who had used  
14 that model and updated that. So we used that as our  
15 foundation for doing the hydrology of how much water is  
16 running off during Hurricane Harvey. And then I will  
17 have all the flows going into the reservoirs and then  
18 also into Buffalo Bayou directly.

19 The other model would be the hydraulic model  
20 that's called HEC-HMS developed by the Army Corps of  
21 Engineers. That's the model that, my understanding,  
22 the Corps of Engineers was using, but also it was used  
23 by the Harris County Flood Control District, and then  
24 also is what's used by FEMA, the Federal Emergency  
25 Management Agency, at the federal level for this.

1           So we took -- built that model for the  
2   hydraulic model for the downstream of the -- the two  
3   reservoirs for Buffalo Bayou, and then we looked at two  
4   different scenarios. One, we used the hydrology and  
5   the hydraulic to look at what actually happened during  
6   Hurricane Harvey. We simulated the gates opening just  
7   per the Water Control Manual of how they were. We used  
8   gauge data that looked at the elevation within the  
9   creek to try to match it, and then we simulated  
10   Hurricane Harvey and what was flooded.

11           Then on the flip side, the main thing we did  
12   is we just assumed all the gates out of the two  
13   reservoirs, both Addicks and Barker, were closed. So  
14   they never were open according to the induced  
15   surcharge, and said, "Okay. What would happen?" We  
16   closed that, and then we built a model to look at how  
17   much water would be going around. Would it go around  
18   all these auxillary spillways, both Barker or Addicks.  
19   Barker, it would never flank. It would fill up. The  
20   water would not go around the emergency spillway. For  
21   Addicks that's up on the north, it would continue to  
22   spill at that same location that we saw the picture,  
23   but it would go up a little bit higher, about like a  
24   foot or foot and a half of more water that would go  
25   around it, but it was still significantly less than the

1 spillway design flow that we talked about. So that was  
2 the model itself. So then we could quantify how much  
3 water would go around the dam on the auxillary spillway  
4 to the north, and then we can look at, you know, how  
5 that water would re-enter into Buffalo Bayou. So  
6 that's the overview of the two models.

7 Q. And the two models, yours and Nairn's?

8 A. Yes, correct.

9 Q. Are both of those -- and I want to spot the  
10 government's model. Are both of those generally  
11 accepted models in the engineering committee?

12 A. The one that Geosyntec used were the ones  
13 that were used -- typically used by Harris County, the  
14 Army Corps, and FEMA, and the US. Dr. Nairn used  
15 another model that's typically used in other  
16 situations. It's actually a French-based company that  
17 used it. It's a 2D model that he used and developed.  
18 But at the outset, methodology is similar. The models  
19 are different. Ours are federally accepted in the US.  
20 But then the output of the results of it are generally  
21 similar, as Dr. Nairn mentioned.

22 Q. Did your model include observed data?

23 A. Yes, it did.

24 Q. Tell the court why observed data is so  
25 important.

1           A.    Yes.  So as we looked at the downstream along  
2   Buffalo Bayou, the hydraulics of how the water was  
3   going, we wanted to not just look at, you know, what  
4   was peak water level that was achieved, we also looked  
5   at observed data, both the elevation of where it  
6   achieved from gauged data, but also the homeowners, and  
7   we looked at temporally or when it started flooding.  
8   Did it start on the 27th, 28th, 29th, really just  
9   seeing did that water get to that high elevation before  
10  or after induced surcharges were instituted.  So then  
11  we could figure out, okay, not only is our model  
12  hitting the proper elevation, temporally did it hit it  
13  on the right day because that's just important did it  
14  flood on the 27th at the beginning of the storm or did  
15  it start flooding on the 29th or 30th later in the  
16  storm event.

17           Q.   Do you know if Mr. Nairn used observed data?

18           A.   I'm not aware if he did.

19           Q.   You're aware that he did not, correct?

20           A.   Correct.  I --

21                   MS. DUNCAN:  Objection.  Leading.  And, Your  
22  Honor --

23                   THE COURT:  Well, let's clarify the question.  
24  Repeat the question.

25

1 BY MR. MCGEHEE:

2 Q. Did Nairn use observed data?

3 A. He used observed data just for the gauge  
4 data. But as far as residents of when it happened, I  
5 did not see anywhere in his report for the upstream or  
6 the downstream report of where he used observed data at  
7 the homes of what the flooding elevation was or when it  
8 happened.

9 Q. Okay. At this time I'd like to show you a  
10 chart that you've seen before that lists the 12 test  
11 properties.

12 MS. DUNCAN: Yes. And, Your Honor, while  
13 he's doing that, I'd like to re-urge our objection.  
14 Now that we've heard Mr. Bardol go into significant  
15 detail about Dr. Nairn's model that has not been put  
16 into evidence yet and has never disclosed in his  
17 report, we'd like to re-urge that this is well beyond  
18 the scope of his report. It's not disclosed under  
19 Rule 26, and it shouldn't be included. If plaintiffs  
20 want to do a comparison, they can do so in cross, they  
21 can do so in argument or on rebuttal within the scope  
22 of his report. This is improper.

23 THE COURT: Okay. Well, at this point, the  
24 court has ruled. We will allow this. Presumably if  
25 Dr. Nairn doesn't testify, I'll let you renew the

1 objection.

2 BY MR. McGEHEE:

3 Q. I'm going to write the word "I" here, and "I"  
4 means you. "I" means Matt Bardol.

5 A. Yes, sir.

6 Q. "I agree with Dr. Nairn." And the inverse is  
7 true, too, "Dr. Nairn agrees with me." Are you with  
8 me?

9 A. Yes, sir.

10 Q. 1 through 12, what are you in agreement?

11 A. Yeah. And just -- and part of this is a -- I  
12 think there was an affidavit that I submitted soon  
13 after I did the report where I had just a visual of  
14 Dr. Nairn's table of where he had the depth of  
15 elevation, so there was --

16 Q. Oh, I forgot about that.

17 So you did address Dr. Nairn's report in your  
18 report -- in your affidavit?

19 A. In the affidavit where I looked at the output  
20 of the depth of flooding from his gates closed  
21 scenario.

22 Q. Thank you for that clarification.

23 MS. DUNCAN: Your Honor, may I jump in here  
24 and raise another objection? He has just now admitted  
25 that this information he's citing is not in his report.

1 It was in an affidavit filed later. That doesn't make  
2 it part of the Rule 26 disclosures. If anything, it is  
3 a rebuttal report. It should be saved for a rebuttal  
4 case.

5 THE COURT: Maybe. The rebuttal, using a  
6 reference there was an affidavit does not seem to be  
7 needed to be a rebuttal. That's direct testimony in  
8 the direct case. It's a thing that has happened. So  
9 there's no hearsay involved in that especially when  
10 you're putting on the rebuttal not for the truth of it  
11 but to say he did put an affidavit in. So I'll allow  
12 the testimony.

13 BY MR. McGEHEE:

14 Q. So let's go down 1 through 12. Number one,  
15 Milton, you're both in agreement with each other?

16 A. Correct, both agree that there's no flooding.

17 Q. Shipos?

18 A. Both agree.

19 Q. Memorial Southwest.

20 A. We largely agree. We're -- actually,  
21 Dr. Nairn's report shows zero flooding for Memorial  
22 SMC. Our model shows minor flooding that's consistent  
23 with the testimony, about six or eight inches. But  
24 there was significant flooding after the induced  
25 surcharge that there was several feet more of flooding



1 after the gates were opened.

2 Q. Okay. So I jumped -- I agree, I put Nairn  
3 has zero flooding. And gates closed, I wrote minor  
4 flooding for yours.

5 A. Correct, yes, sir.

6 Q. Okay. Let's finish up.

7 Good Resources, agree?

8 A. Both agree there was no flooding.

9 Q. Aldred?

10 A. We have a minor disagreement. I show zero  
11 flooding. Dr. Nairn's report shows .4 feet, which is a  
12 few inches of flooding.

13 Q. Whose do you think it correct?

14 A. When we look at the observed observation from  
15 Aldred, the observed flooding was well after the  
16 induced surcharge. So our models are very close or  
17 relatively close in this area where we show no and he  
18 shows a few inches. The flooding starts to occur after  
19 the induced surcharge.

20 Q. So when I wrote "no" on your column, based on  
21 observed data; is that correct?

22 A. Correct, yes.

23 Q. Okay. Hollis, agree?

24 A. Oh, we both agree there's no flooding.

25 Q. Silverman, agree?

1 A. Correct, we agree there's no flooding.

2 Q. Godejord, agree?

3 A. We agree there's no funding.

4 Q. Cutts, agree?

5 A. We agree there's no flooding.

6 Q. Beyoglu?

7 A. Both of these -- the last three here,  
8 Beyoglu, Azar, and Welling, we disagree in the sense  
9 that, you know, both of our models show some amount of  
10 flooding prior to induced surcharge. In his expert  
11 report that I relied upon in mine, he makes a statement  
12 in his conclusions that potentially downstream of  
13 Beltway 8 there could be longer induced -- or there  
14 could be longer periods of flooding, you know, with  
15 induced surcharges, so that's -- we agree on that  
16 portion of it.

17 Our model shows both, you know, we could go  
18 back to Beyoglu, that there was minor flooding for that  
19 prior to induced surcharge, but then there was  
20 significantly more flooding and longer flooding.

21 Q. So I have here a column "Gates Closed - Less  
22 flooding, shorter duration." Is this Nairn's opinion,  
23 10, 11, and 12?

24 A. He doesn't provide a narrative of each of  
25 these properties. He just has a table of elevations.

1 Q. Based on his table of elevations?

2 A. Correct.

3 Q. Okay. And gates closed, according to you,  
4 gates closed, there was no flooding for Milton?

5 A. Correct.

6 Q. For Shipos?

7 A. There's no flooding.

8 Q. Minor flooding for Memorial Southwest. Even  
9 though the government said there was no flooding, you  
10 admitted there's minor flooding?

11 A. Correct, yes.

12 Q. Okay. Good Resources?

13 A. There was no flooding.

14 Q. Hollis?

15 A. There was no flooding.

16 Q. Silverman?

17 A. There was no flooding.

18 Q. Godejord?

19 A. No flooding.

20 Q. Cutts?

21 A. There was no flooding.

22 Q. And then we have here the others.

23 So based on all these, if the gates were  
24 closed, would the infected -- would the property  
25 owners, the test property owners have been better off?

1           A.     Yes.  As far as when we look at depth of  
2     flooding and duration, yes.

3           Q.     If the gates had been closed, would dam  
4     safety have been an issue?

5           MS. DUNCAN:  Objection.  Now we're beyond the  
6     scope of his opinion on inundation mapping.  He is not  
7     a geotechnical engineer.  He cannot offer opinions on  
8     dam stability or dam integrity.  May I have a brief  
9     voir dire on this?

10          THE COURT:  At this point, voir dire doesn't  
11     seem to be appropriate.  It's -- well, actually, I'll  
12     probably let the court ask a voir dire question.

13          Did you take this from testimony by a  
14     geoscientist?

15          THE WITNESS:  If I could maybe expand on  
16     this.  Just as far as dam safety, and I said it  
17     slightly before, I don't know if it was heard, dam  
18     safety has two components.  There's the hydrology,  
19     hydraulics, the water, and then there's the  
20     geotechnical.  We work hand in hand.  I do a lot of dam  
21     safety reports, and there's a geotechnical and a water  
22     resources component looking at those two components.

23          THE COURT:  And in this specific case, was  
24     this from -- which part was this from?

25          THE WITNESS:  This part, as far as the

1 question that was right here --

2 THE COURT: Yeah.

3 THE WITNESS: -- there's no concern for dam  
4 safety from the hydrology, hydraulics. For the water  
5 going around the spillways, going around the auxillary  
6 spillways, I'm relying on the previous testimony and  
7 the government report on the geotech. I'm not offering  
8 any geotechnical opinion on the piezometers or anything  
9 else. It was already submitted by the after-action  
10 reports. We're relying on that geotechnical. But when  
11 it comes who the hydrology, hydraulics, and the  
12 scouring of the spillways, that's why they were  
13 reinforced with roller-compacted concrete. I'm  
14 qualified to speak to the sheer forces, sheer  
15 velocities, and the scouring component for the  
16 functionality of the spillways being designed for that  
17 flow rate.

18 THE COURT: Okay. Well, I'll allow the  
19 question. I think there's foundation that's been laid.

20 BY MR. McGEHEE:

21 Q. And, Matt, I -- I'm done with this chart,  
22 unless there's anything else you want to include.

23 A. No, that's all, sir.

24 MR. McGEHEE: Let's call that 407. And we  
25 would offer 407, Plaintiffs' 407 into evidence as

1 demonstrative at this time.

2 THE COURT: Any objection?

3 MS. DUNCAN: No objection.

4 (Admitted Exhibit No. PX 407.)

5 MR. McGEHEE: Your Honor, we would offer  
6 Mr. Bardol's affidavit as well, Plaintiffs' Exhibit  
7 PX 015, into evidence.

8 MS. DUNCAN: We do object to that because  
9 it's an undisclosed expert opinion and an affidavit  
10 itself. Outside of construct of Rule 26, it is  
11 hearsay.

12 THE COURT: What is the purpose for which  
13 you're offering the affidavit?

14 MR. McGEHEE: Judge, to complete his report.  
15 And she says "undisclosed" so many times. We've given  
16 this to her. She's had this for five years or --  
17 several years, and she's referred to it. And it was  
18 just a complete -- to complete his expert report.

19 MS. DUNCAN: Right. What I mean by that,  
20 Your Honor, when I say "undisclosed," I mean  
21 undisclosed pursuant to Rule 26. What he's -- this  
22 affidavit is a rebuttal report that came long after the  
23 rebuttal -- excuse me, the expert report deadlines, and  
24 so it's an improperly disclosed expert report. It was  
25 attached to the summary judgment filings, we believe.

1 MR. McGEHEE: And I think that helps us.

2 But, anyway, it's the 12th of June 2019, it was  
3 provided to the government shortly thereafter.

4 THE COURT: And what is it? Tell me the  
5 background. Who is Mr. Bardol, I guess? And what is  
6 his affidavit for?

7 MR. CHANG: Your Honor, if I may? H.C.  
8 Chang. This is the affidavit that the witness was just  
9 referencing a comparison that could be actually  
10 summarized in that chart, a comparison of his opinion  
11 and Dr. Nairn's opinion.

12 THE COURT: How is that relevant to those two  
13 opinions? Who is Mr. Bardol and what is -- why is  
14 he drafting --

15 MR. McGEHEE: Yeah, it was the witness'  
16 affidavit.

17 THE COURT: Oh, it's the witness.

18 THE WITNESS: Yeah, it was my affidavit.

19 THE COURT: Oh, okay.

20 MR. McGEHEE: And I should have done a better  
21 job. This is -- if I could approach the witness?

22 THE WITNESS: Yes, sir.

23 BY MR. McGEHEE:

24 Q. Is that your affidavit?

25 A. Yes, it is.

1 Q. Okay.

2 THE COURT: What would the affidavit be  
3 introduced for?

4 MR. McGEHEE: To complete his report and to  
5 support his testimony. And, quite frankly, he was  
6 cross-examined on this for several hours during his  
7 deposition.

8 MS. DUNCAN: Not on that he was not. I  
9 didn't even introduce it as a deposition exhibit. And,  
10 Your Honor, his testimony came in about it. I mean,  
11 the affidavit doesn't come in. The affidavit itself is  
12 hearsay. It's not a properly disclosed expert report,  
13 affirmative or rebuttal.

14 THE COURT: I agree. I'll exclude it. I'll  
15 sustain the objection.

16 MR. McGEHEE: Thank you, Your Honor.

17 BY MR. McGEHEE:

18 Q. Mr. Bardol, as you know, we don't think an  
19 emergency existed. You testified as much. But let's  
20 assume -- let's assume there was an emergency. What's  
21 the danger in having an actual bona fide emergency and  
22 not declaring it in writing to the City of Houston, to  
23 Harris County, to Fort Bend, and to the Houston  
24 residence? What's the danger in not formally  
25 disclosing it?



1 MS. DUNCAN: Objection, Your Honor. This is  
2 well beyond the scope of his report. He never talks  
3 about this sort of thing and reporting declarations.

4 THE COURT: Well, I've heard some discussion  
5 that has dealt with this whole question of emergency  
6 which is central to the case, so I'll allow the  
7 question.

8 THE WITNESS: Yes, as far as not formally  
9 declaring it, the Emergency Action Plan, ones I've  
10 written, ones I've followed and go through, it is  
11 there's a formal declaration and there's a formal  
12 action for notifications. There's usually typical, you  
13 know, emails or notifications that go out to certain  
14 officials explaining what the emergency is and what the  
15 resulting actions are. So if there's not that formal  
16 declaration or implementing that that I didn't see, the  
17 danger would be that the right people are not being  
18 notified of the impending danger, what action needs to  
19 be done, and then those, you know, other formal chains  
20 of command can actually be implemented.

21 BY MR. McGEHEE:

22 Q. How troubling was it to you when you heard  
23 the word "informal emergency"?

24 A. I mean, when I heard "informal," it's --  
25 it's -- you either declare an emergency or not. So I

1 just -- it doesn't make sense as far as an oxymoron, I  
2 think that was the term that was used before, of not  
3 having a formal declaration emergency. An informal  
4 emergency, is not quite there.

5 My wife's a nurse. They have certain codes.  
6 If there's an emergency, it's usually declared. They  
7 go through it. Same thing in engineering, Emergency  
8 Action Plan. So it's usually a formal declaration, so  
9 there's procedures that you follow afterwards.

10 Q. Thank you, sir.

11 MR. McGEHEE: Pass the witness.

12 THE COURT: Okay. Well, we're going to  
13 have --

14 MR. McGEHEE: I'm being told here, can we do  
15 some housekeeping admissions here? I talked about a  
16 bunch of exhibits and I didn't admit them.

17 THE COURT: Sure, let's get through those  
18 quickly.

19 MR. CHANG: Your Honor, there were a number  
20 of exhibits referenced by Mr. McGehee today. I would  
21 just briefly go over them.

22 First of all, there is the CV of Mr. Bardol.  
23 I think we incorrectly identified it. It should be PX  
24 354.

25 THE COURT: Okay.

1 MR. CHANG: That Mr. Bardol's CV.

2 And there's a copy of Mr. Bardol's report.  
3 That should be PX 014. And then there are number of  
4 exhibits, joint exhibits that should be preadmitted.  
5 There's Water Control Manual, that's JX 002. There's  
6 Emergency Action Plan, that's JX 003. And then there's  
7 a memorandum for commander, JX 053. I'll make a note  
8 that it's really two pieces of documents. It's a  
9 memorandum for commander report of performance, JX 053.  
10 And then there's the Addicks and Barker Dam Safety  
11 Modification Report, that's JX 042. And then there's  
12 the 2009 draft operational assessment, that's  
13 Plaintiffs' Exhibit PX 333. And, finally, the 1962  
14 Addicks and Barker Reservoir regulation manual, that's  
15 PX 004. The plaintiffs would move to admit these  
16 exhibits into the evidence.

17 THE COURT: Any objection?

18 MS. DUNCAN: We only have one objection, and  
19 that relates to PX 014, and we'd like to simply make a  
20 record that we object to the portions of Section 8  
21 being admitted that relate to dam integrity, and  
22 there's three specific sentences, if I can read them  
23 into the record, because he's not a geotechnical  
24 engineer, and he's not qualified to make those  
25 opinions. And we further object to two conclusory --

1 or a conclusory sort of statement in the factual  
2 background relating to an emergency. May I read those?

3 THE COURT: Yes.

4 MS. DUNCAN: So we object to the sentence on  
5 2-20 of PX 14, "Per USACE's own post-Harvey report,  
6 there is no creditable evidence that any emergency  
7 implicating possible dam failure existed at the time of  
8 Hurricane Harvey." We, of course, object because we  
9 don't believe Mr. Bardol is qualified for that.

10 We also object to portions of Section 8, the  
11 very last sentence on page 8-55, "These protective  
12 levees could have sustained significantly higher  
13 floodwaters than imposed during Hurricane Harvey."  
14 That is the portion we object to. We believe that's a  
15 geotechnical opinion, not for Mr. Bardol who is a flood  
16 modeler.

17 We also object to the entirety of the  
18 portions on 8-56.

19 THE COURT: Which are?

20 MS. DUNCAN: I can read those. The first  
21 bullet on 8-56 states, "In response to dam safety  
22 concerns identified by USACE, rehabilitation efforts  
23 were completed by USACE after publication of the  
24 1962 RRM to improve performance of the outlet works, in  
25 other words, mitigate potential for excessive seepage

1 and piping." It goes on, "The previous, in other words  
2 pre-Hurricane Harvey, maximum pool of record, in other  
3 words, 102.65 foot at Addicks and 95.2 foot at Barker  
4 were reached in 2016 and provided a full scale  
5 demonstration of the effectiveness of rehabilitation  
6 activities at the outlet works completed since  
7 imposition of 2012 Water Control Manual. Therefore, it  
8 was not necessary from a dam safety perspective to open  
9 the gates." That is a problem, Your Honor because he  
10 cannot speak to and did not analyze in this report the  
11 effectiveness of the rehabilitation activities, and  
12 that would be geotechnical engineer's purview.

13 And, finally, we object to the second half of  
14 the sentence, the last bullet on 8-56 where it states  
15 "and there would have been no significant decrease in  
16 dam safety due to levee instability and/or seepage and  
17 piping." That also is a geotechnical opinion.

18 THE COURT: Mr. McGehee?

19 MR. McGEHEE: Your Honor, it just sounds like  
20 she's objecting to the parts of the report that the  
21 government doesn't like. He's proved himself up as an  
22 expert in those areas. He's talked about them. He's  
23 testified to it. And I think the entire report should  
24 come in and not redacted based on the government's  
25 wishes.

1 MR. CHANG: Your Honor, one additional thing.  
2 That segment of the report was performed by Mr. Bardol  
3 in connection with a geotechnical engineer. That was  
4 entirely disclosed.

5 THE COURT: Okay. I'll allow the material.  
6 (Admitted Exhibit No. PX 354.)  
7 (Admitted Exhibit No. JX 042.)  
8 (Admitted Exhibit No. JX 002.)  
9 (Admitted Exhibit No. PX 014.)  
10 (Admitted Exhibit No. JX 003.)  
11 (Admitted Exhibit No. JX 053.)  
12 (Admitted Exhibit No. PX 333.)  
13 (Admitted Exhibit No. PX 004.)

14 MR. CHANG: Thank you, Your Honor.

15 THE COURT: One of the things particularly  
16 with reports is the court doesn't want to sort of  
17 redact and go over a report. They're going to --  
18 generally unless a report is somehow way off. This one  
19 seems to not be way off, and there was a geo engineer  
20 working with Mr. Bardol, so I'll allow the documents  
21 in.

22 Okay. Do we have anything else on a -- yes?

23 MR. McGEHEE: No, sir. We pass the witness.

24 THE COURT: Okay.

25 So the witness will be back with us on

1 Monday.

2 THE WITNESS: I guess so, yes.

3 THE COURT: And --

4 MS. DUNCAN: Your Honor, will the witness  
5 remain under oath over the weekend?

6 THE COURT: Yes, yes. He can't be  
7 interrogated over the weekend.

8 So no one can cross-examine you or examine  
9 you --

10 THE WITNESS: All right.

11 THE COURT: -- or put you on any stand  
12 anywhere except maybe a bandstand if you play an  
13 instrument. So you're excused at the moment and we'll  
14 look forward to seeing you Monday.

15 I think now that we know how to get to the  
16 place and we know that our GPS is at least working now,  
17 I think we can make it here without any trouble. So  
18 let's resume at 10:00 o'clock on Monday. And then  
19 we'll have who on Monday after Mr. Bardol --

20 MR. McGEHEE: Judge, as soon as --

21 THE COURT: Cross.

22 MR. McGEHEE: -- Mr. Bardol is finished, we  
23 will call Robert Thomas.

24 MR. NOLEN: Rob Thomas, correct, Your Honor.

25 THE COURT: And what is the likely -- his

1     likely length?

2                   MR. McGEHEE:   Ours is two hours.   An hour for  
3     direct.

4                   THE COURT:   So we're talking about finishing  
5     him -- well, after cross early afternoon?

6                   MR. McGEHEE:   I would hope so, Your Honor,  
7     but --

8                   MS. DUNCAN:   Recall, Your Honor, that we're  
9     also conducting our direct exams at the same time for  
10    efficiency so that we can get the witnesses up and down  
11    and they can leave.   And so we have a lengthy direct  
12    exam prepared with Mr. Thomas, given his significant  
13    role he played in this event, so we anticipate  
14    approximately five hours, maybe.

15                  THE COURT:   So that will presumably end the  
16    day on Monday.   Will we be able finish that then  
17    Monday, do you think?

18                  MS. DUNCAN:   I'm not sure because, I mean,  
19    we'll have to do the cross-exam of Mr. Bardol.

20                  THE COURT:   Okay.   Right.

21                         What does then Tuesday look like?

22                  MR. McGEHEE:   Sir, Tuesday we're going to  
23    call Colonel Zetterstrom, and that's it.   And then  
24    Nairn.   And Kauffman.

25                  MR. NOLEN:   Michael Kauffman.



1 MR. McGEHEE: Michael Kauffman. So we have  
2 two witnesses and then their expert.

3 THE COURT: Okay. So now we're looking at  
4 then --

5 MR. NOLEN: Oh, and Richard Long. I'm sorry.  
6 Richard Long. We have three experts.

7 THE COURT: So Wednesday, do we have then  
8 Wednesday potentially lined up?

9 MS. DUNCAN: Well, Your Honor, if the  
10 plaintiffs actually call each of those witnesses, then  
11 that will take care of, I believe, most of the fact  
12 witnesses on our list unless we decide somebody else  
13 needs to be called from our may call list. And the  
14 last person that we would call would be Dr. Nairn.

15 THE COURT: Okay. So that would mean we  
16 could finish up probably by the end of Wednesday and  
17 Thursday do the site visit?

18 MR. NOLEN: Yes, sir.

19 THE COURT: And then would there be anything  
20 else then we'd want to do back in court on Friday?

21 MS. DUNCAN: Well, Your Honor, I don't think  
22 that we made arrangements to have our witnesses or  
23 anything around. I mean, if -- or even the teams. I  
24 think all of teams who are coming down from DC are  
25 largely going back. I am local, but I think most

1 everyone else is not. So, you know, I think we'll have  
2 to see if there is any testimony to finish up and when  
3 we can schedule that for.

4 THE COURT: Okay.

5 MS. DUNCAN: And for closing arguments or  
6 briefing would be helpful, when to schedule that for.

7 THE COURT: Okay. Let's think about that  
8 later. But we'll likely then have Monday, Tuesday, and  
9 Wednesday, pretty much full days, maybe finishing  
10 Wednesday. And then Thursday the site view. And then  
11 if there's anything more, we can do it Friday, I guess.

12 MS. DUNCAN: Well, Your Honor, I'm not sure  
13 that we can. Dr. Nairn and our attorney handling him  
14 is not available after Wednesday, which is why we  
15 proposed the site visit for Thursday --

16 THE COURT: Okay.

17 MS. DUNCAN: -- instead of trial. So we  
18 would not be able to finish that part. But if, for  
19 example, we did finish Dr. Nairn and plaintiffs had a  
20 rebuttal case or something, perhaps if we could make  
21 those arrangements. We'd have to look into it.

22 THE COURT: Well, what the court would prefer  
23 rather than coming back down from the court as well as  
24 probably other people here, we could always do the --  
25 if we had an extra day's worth, we could do a Zoom

1     hearing. I think I found that particularly with the  
2     hearing where you know the people and you've seen them  
3     live and you know the credibility, all those things,  
4     doing it by Zoom afterwards is much easier than would  
5     imagine and very effective. I mean, I don't know that  
6     I would start a trial on Zoom having never seen the  
7     people in person. But after having had not only  
8     other -- plus or other hearings and this trial, I think  
9     it would be fairly easy to do a day of Zoom to finish  
10    up.

11                 MR. McGEHEE: That would be fine with us,  
12    Judge.

13                 MS. DUNCAN: We'd just need to find a day,  
14    Your Honor.

15                 THE COURT: Yeah.

16                 MS. DUNCAN: And, you know, also if it's just  
17    experts and we're not burdening fact witnesses, another  
18    option might be to meet in D.C. at your courthouse.

19                 THE COURT: Well, we're happy always to have  
20    you, though I don't want to put any stresses on anyone  
21    from Texas coming up, but certainly everyone will be  
22    welcome. But talk among yourselves and come up with  
23    something that you think works for all -- everyone.  
24    And the court is happy to do it if we want to do it in  
25    D.C. or want to do by Zoom. So in terms of making

1 arrangements to leave, I may make arrangements to leave  
2 Friday rather than -- currently I think our flights  
3 leave Saturday since we're --

4 MS. DUNCAN: Friday is good.

5 THE COURT: Yeah, it seems to be we're not  
6 going to be able doing anything on Friday, so we'll do  
7 the site visit and then leave Friday. And then we'll  
8 have a -- why don't we schedule then the following week  
9 we'll have status conference on Monday and see what  
10 you've collected and recommended.

11 MS. DUNCAN: Your Honor, the parties did file  
12 a joint sort of proposed itinerary for the site visit.  
13 We have sort of practiced the route since we filed that  
14 and noted a few small changes for efficiency. I think  
15 we've got agreement with plaintiffs on those. So we'll  
16 try to get that on file in the coming days. It's  
17 negligible impact. It won't change the start and end  
18 time. And we expect that to wrap up by early  
19 afternoon. So if you're changing flights another  
20 option might even be late Thursday, if you'd prefer.

21 THE COURT: Okay. Well, how long is -- we're  
22 going to meet I think it was 10:00 o'clock for the site  
23 visit. Where -- logistically where are we going to  
24 meet?

25 MS. DUNCAN: Yes, Your Honor. I'll give you

1 the overview, and then it's all in writing on the  
2 docket if you need to refer back to it. So we'll meet  
3 out at the corps' project office which --

4 Rand, if I can borrow this, and, Jack, if I  
5 could borrow this map?

6 We're going to meet right out here, Judge.  
7 You might even see some pictures of where we're going  
8 to meet in coming days. So we're going to jump, all of  
9 us, into a van that the corps has arranged for us, and  
10 there will be room for yourself and the clerk and a  
11 corps representative who can sort of tell us what we're  
12 seeing.

13 THE COURT: Okay. Where will we meet the  
14 van?

15 MS. DUNCAN: We'll meet the van at the corps'  
16 project office. There's a big parking lot. It would  
17 require driving out there and then all jumping into the  
18 van.

19 THE COURT: Okay. So the van is out there.  
20 Yeah, if we have good instructions then so we can get  
21 there without getting lost again.

22 MS. DUNCAN: Yes.

23 And if I could just briefly walk you through.  
24 What we'll do is we'll start out at the outlets here on  
25 Barker reservoir. We'll drive through briefly some of

1 the downstream property neighborhoods before we go up  
2 to the Addicks Reservoir. We'll drive on the dam  
3 around and up and out to that end of the dam where the  
4 uncontrolled releases were flowing around during the  
5 event.

6 MR. McGEHEE: The puddle.

7 MS. DUNCAN: And then we'll come back down to  
8 Clay Road, we'll come over, then we'll see some of the  
9 upstream neighborhoods that also flooded during the  
10 storm. And then we'll come on back and hop out of van.  
11 And then we have a route proposed by plaintiffs to sort  
12 of follow along near the bayou to make your way back to  
13 downtown as a sort of self-guided tour back.

14 THE COURT: Okay.

15 MS. DUNCAN: Does that sound right?

16 MR. NOLEN: Yeah, that's right.

17 MR. McGEHEE: And, Judge, can we ask, are you  
18 in a rental car or are you Uber or are you driving --

19 THE COURT: Yeah, we're in a rental car.

20 MR. McGEHEE: Okay. So we need to end up  
21 where we started then, it sounds like.

22 THE COURT: Yeah, that's what I was just  
23 thinking. If we were going to start downtown with the  
24 van, it would be more convenient because we would leave  
25 our car down here at the court and then come back to

1 the court and then go back to the hotel.

2 MR. McGEHEE: Can't we just do it in reverse?

3 MS. DUNCAN: We can look into it.

4 MR. McGEHEE: Judge, we've been pretty  
5 cooperative on this. I would propose that we start by  
6 the courthouse and you get in and get out the same  
7 place, but we would have to reverse engineer the trip.  
8 But if you give us time, maybe we can figure it out.

9 THE COURT: Okay. That will be great if you  
10 could.

11 So we will see you-all at 10:00 o'clock  
12 tomorrow. Have a good night.

13 MR. McGEHEE: Monday.

14 THE COURT: Monday. I'm sorry. Have a good  
15 weekend.

16 (Proceedings recessed at 5:23 p.m.)

17

18

19

20

21

22

23

24

25

## 1 C E R T I F I C A T E

2

3

4

5 I, Gary Schneider, a shorthand reporter, do hereby  
6 certify that the foregoing proceedings were taken down  
7 and transcribed under my direction to the best of my  
8 ability.

9

10 DATED: November 12, 2024 s/Gary Schneider  
11 Gary Schneider, RMR, CRR

12

13

14

15

16

17

18

19

20

21

22

23

24

25



1	ADMITTED EXHIBITS		
2			
3	JX	PAGE	DESCRIPTION
4	002	206	11/1/2012-Water Control Manual
5			(2012)
6	003	206	5/22/2014-Addicks and Barker
7			Emergency Action Plan (2014)
8	042	206	5/1/2013-DSMR ? U.S. Army Corps
9			of Engineers, Addicks and Barker
10			Dam Modification Report (May 2013)
11	053	206	10/27/2017-Report of Performance,
12			New Pool of Record After Harvey
13			(2017)
14	089	174	8/27/2017-Email String Ending
15			in 8-27-17 Email from Charles
16			Scheffler to Robert Thoma
17			regarding plan to follow water
18			control manual
19	106	172	8/27/2017-Email from Maglio to
20			Michael Sterling, Michael Zalesak,
21			and Rob Thomas with subject
22			"RE:Deviation"
23	109	174	8/29/2017-Email from Maglio to
24			DLL-CESWG-FLOOD with subject
25			"Addicks flow around northern"

1	110	174	8/29/2017-Email from Maglio to
2			DLL-CESWG-FLOOD with subject "Image
3			of the Addicks emergency spillway"
4			
5	PX	PAGE	DESCRIPTION
6	004	206	Apr-62-U.S. Army Corps of Engineers,
7			Galveston District, Buffalo Bayou,
8			Texas Reservoir Regulation Manual for
9			Addicks and Barker Reservoirs,
10			Buffalo Bayou Watershed ("1962
11			Reservoir Regulation Manual")
12	014	206	11/13/2018-Initial Expert Opinion
13			Report of M. Bardol, P.E., C.F.M.,
14			D.WRE and R. Bachus, Ph.D., P.E., D.GE
15			("Bardol Expert Rep.")
16	333	206	Oct-09-USACE (2009): Draft Operational
17			Assessment of the Addicks and Barker
18			Reservoirs, Fort Bend and Harris
19			Counties, TX, Galveston District,
20			sponsored by Harris County Flood Control
21			District, October 2009.
22	354	206	8/29/2024-Matthew Bardol's revised CV
23	405	67	Demonstrative
24	406	87	Demonstrative-chart entitled "Capacity"
25	407	198	Demonstrative-chart